

# WESTERN INDUSTRY

VOLUME VII NO. 6



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## What's New with the Editor

WESTERN businessmen at a meeting in San Francisco last month heard the news on the War Production Board order—M 126—and the news was all bad. The decree was a general conservation order forbidding the use of iron and steel in a list of over 400 items. The prohibition ranged all the way from perfume atomizers and beer cans to structural steel for homes. New items are constantly being added to the original 400. The full impact of the order may not reach the public until items disappear from store shelves. It is imperative that businessmen acquaint themselves with the order and endeavor to make arrangements to obtain other items in which to deal.

Second and most important phase of war-time price control went into effect May 16 to last for the duration. America then started to shop in a new world—a world of stores with prices regulated by OPA. From now until peace returns, the highest prices that each individual store charged during March are the "ceiling prices" for practically everything eaten, used and worn. Automatic licensing of each and every retail store is now in effect. No certificates or other physical evidence is given to any store but each is none-the-less licensed. In the very near future, OPA will undertake a national registration of all retail outlets.

The wine industry is to have a new role. Immediate inauguration of a program for the production of tartrates has been urged on the wine producers of California by the War Production Board. It seems that a serious shortage of tartrates looms and the wine industry is the only available source of these which are used extensively for the manufacture of rayon, medicines and photographic materials. WPB also looks to the wine industry for large supplies of industrial alcohol needed for production of smokeless powder and synthetic rubber.

The shortage of metals has prompted an investigation of the possibility of using plastics for tooling in aircraft. As a result of the investigation, both Lockheed and Vega Aircraft of Burbank, Calif. have started producing tools made of plastics, both for drill jigs and forming dies that will stand up to 8000 pounds pressure per inch under huge hydropresses. Chemically produced plastics are scarce and becoming scarcer. At Burbank some success is being attained with the use of walnut shells to produce plastics. The walnut shells after being powdered are subjected to huge pressures and have produced usable plastics.



# WESTERN INDUSTRY

*The Journal of Western Development*

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### COVER PICTURE

California is second in volume of those states producing petroleum. Confronted for many years with the fear of over-production, the state's resources can now be used to speed the war effort. High octane gasoline is one of the chief needs of the Army and Navy and it is produced here on the Pacific Coast. Shown on the cover picture is the operation of lowering casing into the hole as the well is deepened.—Photo courtesy Union Oil Company of California.



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# Spotlight on the News

Western Industry

FOR JUNE, 1942



Vol. VII

No. 6

## FREEZING ORDER:

## Expect End of Labor Pirating

THAT convenient old western custom of working wherever you pleased, just as long as you pleased and only when you pleased has been threatening production on the Pacific Coast. This situation has been particularly acute in the Pacific Northwest and in Southern California. It also prevails in other industrial areas up and down the coast.

Last month's development that President Roosevelt had directed steps for the freezing of labor was hailed by western industrial heads as a step which would go a long way in stepping up the production in shipyards, aircraft plants and other western war plants. Under the direction of the president, the War Man Power Commission last month revealed that it was taking steps to freeze war industry and "essential" agricultural workers in their present jobs to prevent "pirating" practices detrimental to the war effort.

The medium of "freezing" labor can be made effective by including a clause in all industry contracts binding management to hire new employees only through the U. S. Employment Service.

At Seattle, the problem has been most acute in the aircraft and shipyards industries in that area. In one shipyard alone, it was reported by government officials, there is a monthly turnover of 1,000 men. It is not unusual for most yards to lose as many men in the evening as they are able to hire in the morning. Most of the men quit because they have been told that they can secure a better job elsewhere.

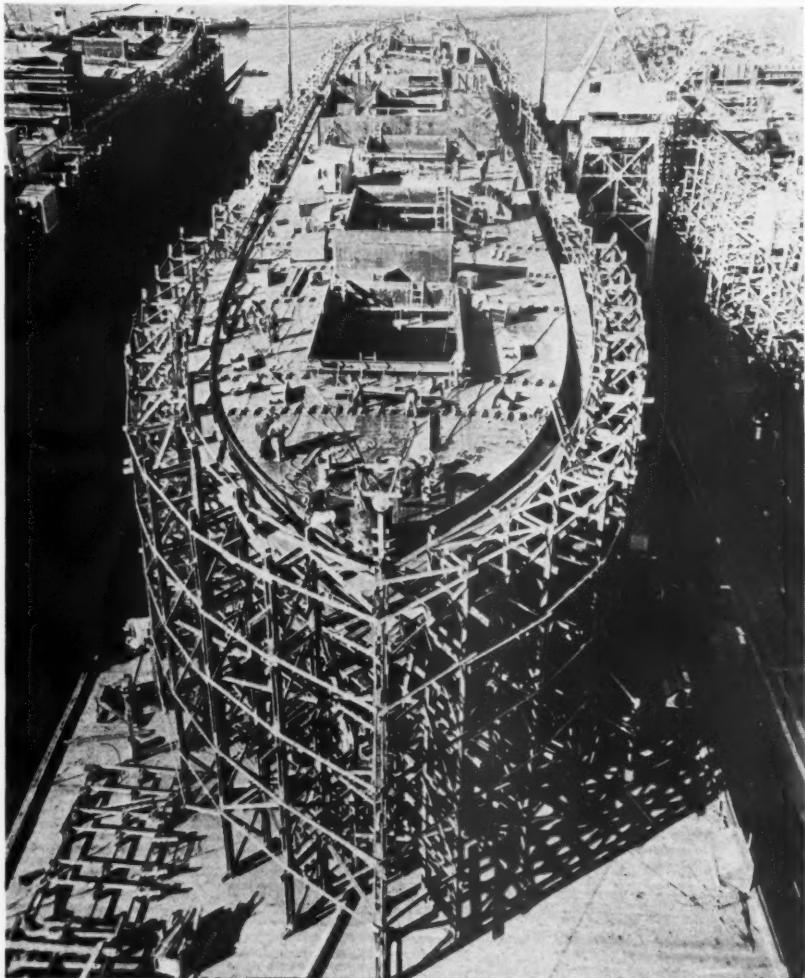
Since all of these men who quit represent labor that has had to be trained and must be replaced by more or less green labor, the old western migratory habit had become a serious production threat. In the shipbuilding field, it is estimated

that it costs \$500 in time, materials and labor to transform a green hand into a semi-skilled craftsman.

One aircraft official of a Southern Cali-

fornia plant has estimated that the cost of training a man to make him really good at a specialized job runs as high as \$800.

• Western shipbuilders expect early solution to personnel problems through recent government order "freezing" labor. Because of tremendous output of western shipyards and shortage of skilled labor, monthly turnover of workmen has been major headache. Illustration of scope of shipbuilding operations is shown below. This is a Liberty ship on the ways of the California Shipbuilding Corp., Terminal Island, near Los Angeles. U. S. Maritime Commission photo.



# "One new Elwell-Parker Truck will speed operations and prolong the life of all our other Elwell-Parkers"



Here is an Elwell-Parker Charging Truck of the type first ordered by our customer. During more than 20 years since, he has added various types of Trucks and a Crane which provide an Elwell-Parker System of Material Handling. He reports:

"We cannot produce on schedule the greatly-increased volume of War Business we have booked because this new business has overtaxed the capacity of our present fleet of Elwell-Parker Trucks to maintain a constant flow of castings.

"At least one new Elwell-Parker Truck is essential, in addition to the Elwell-Parkers we already own. With this new equipment we will not only maintain increased volume by speeding all operations, but will prolong the useful life of all our Elwell-Parkers."

## Bigger and Quicker Foundry Loads Multiply Your Manpower!

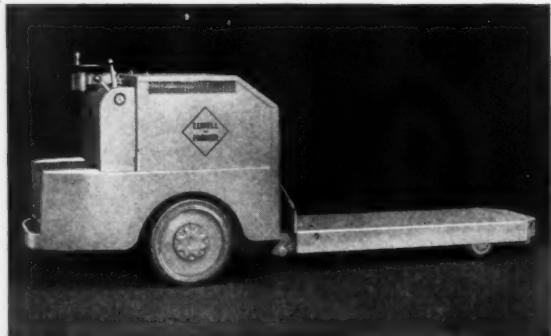
You can Multiply Manpower just as this Customer has. Add new, speedy, big-capacity Elwell-Parkers to your present fleet to handle *bigger* tonnages faster than many men can drag or push or roll. Then move those men into *really vital jobs*—they can learn quickly, because they are already familiar with your floor layout.

Elwell-Parker Trucks directly aid to control costs so vitally important under price ceiling procedure. So get the most work out of your present fleet of Elwell-Parkers. Replacement parts are interchangeable—you need only a small stock.

Like yourselves, Elwell-Parker is establishing new production maximums. But if, like this Customer, you must have one or two new Elwell-Parkers, then we will do our best to co-operate in furnishing vital Truck equipment to Multiply your Manpower and push your War Deliveries ahead of schedule.

Please consult Mr. Perin or Mr. Colby at once.

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# ELWELL-PARKER Power Industrial TRUCKS

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# more NEWS

## Synthetic Rubber

Construction work has started on a \$15,000,000 plant in the Los Angeles area to produce butadiene, petroleum product used for the manufacture of synthetic rubber. The new plant is a subsidiary of Shell Chemical Co. of San Francisco. Government representatives said that it was a logical step to have butadiene plants located in Southern California adjacent to the oil fields. It is anticipated that the Reconstruction Finance Corp. within a few weeks will authorize two additional plants for this area. Previously to the restriction of supplies of natural rubber, Los Angeles was second only to Akron in the production of automobile casings.

## Outsiders In

The stockholders of Standard Oil Co. of Calif. at San Francisco last month broke tradition by electing two "outsiders" to the board of directors. Elected to serve on the board were Andrew N. Kemp, former president of Pacific Mutual Life Insurance Co., and now drafted as head of American Air Lines, and Atholl McBean, chairman of the board of Gladding, McBean & Co. clay products manufacturers. This is the first time in history that those other than company officials have been made directors of Standard.

## More Aluminum

Another huge aluminum reduction plant has been allocated to western territory. The Defense Plant Corporation announced recently that it has approved the selection of a site for an aluminum plant to cost \$12,000,000 at Riverbank, Calif. in the San Joaquin valley. Work on construction of the plant is to start almost immediately. Approximately 1,000 men are to be employed during construction which is to be completed by February 1, 1943.

The new plant will utilize power to be supplied from the San Francisco Hetch Hetchy municipal power largely, though Pacific Gas & Electric Co. will also contribute a portion of the electric energy needed.

## Foundrymen Meet

Labor problems confronting foundries engaged in war production were discussed at a dinner meeting of the Northern California chapter, American Foundrymen's Association, May 8 at San Francisco. Almon E. Roth, president, San Francisco Employers Council, was principal speaker.

The session heard reports on the increased use of cast iron and steel in the manufacture of ordnance from delegates

to the recent national convention of the Association in Cleveland. Bay region foundries, for some time almost entirely engaged in filling war orders, will soon devote their full capacity to this production under recent War Production Board rulings. Some of the nation's key foundry producers are located in this area.

The West continues to forge ahead as the leading producer of domestic aluminum, with the opening of the first unit of the Aluminum Company's 3-unit Troutdale (Oregon) reduction plant late last month.

The \$12,000,000 project will be devoted exclusively to the manufacture of pig aluminum. On the same 665-acre tract on the Columbia river will be a carbon plant for the furnishing of carbon for the electrolytic reduction of aluminum. Second and third units of the plant will be completed late this month and in August. Each is expected to have an output of 30,000,000 pounds per year. Operating superintendent is G. R. Stout, formerly of the Vancouver plant.

Work is now in progress on the \$20,000,000 magnesium production plant being built by the H. K. Ferguson Company near Spokane, Wash. The Electrometallurgical Co., subsidiary of Union Carbide & Carbon Corp., will operate the plant.

The Columbia Steel Company, subsidiary of USS, has announced immediate construction of a foundry costing over \$6,000,000, to be erected on property adjacent to the Pittsburg, Calif., plant. New facilities will provide an additional 30,000 tons to the annual steel casting production capacity. New plant will include two 25-ton basic open hearth furnaces, and one 6-ton electric furnace. Products of the plant will be used almost entirely by the U. S. Navy and Maritime Commission.

Blossom Hill Fruit Company, Santa Cruz, Calif., has just received a government contract for the dehydrating of potatoes. Installation of equipment at the company plant is now in progress. At present capacity the plant will dehydrate 4000 pounds of potatoes a day. The potatoes, which lose 70 per cent of the normal weight after being dehydrated, will be canned in hermetically-sealed cans and shipped to the armed services all over the world.

Work has been started in Oceanside, Calif., for the headquarters of a new plant to manufacture starters for airplane motors. The property at 1911 South Tremont Street is reported to have been acquired by the firm of Jack and Heintz, Inc., of Bedford, Ohio.

## Schuler Heads Industrial Marketers

H. S. Schuler, sales promotion manager, Pacific Coast division of Westinghouse Electric & Mfg. Co., is the new president of the Industrial Marketers of Northern California. He succeeds Norman F. D'Evelyn, advertising executive.



H. S. SCHULER

Harold Coffin, Columbia Steel Co., San Francisco, was elected vice president, and Roy M. McDonald, Western Advertising, was elected secretary-treasurer. The new directors are: W. H. Wilde, The McCarty Co.; G. E. Chambers, editor, *Pacific Purchaser*; Bruce Elliott, Tomaschke-Elliott, Inc.; and Donald F. Forster, King Publications.

That the Far West is finally getting merited consideration in Congress is revealed by the recent announcement of a Congressional sub-committee on naval affairs that serious consideration is now being given toward expanding manufacturing facilities on the Pacific Coast. The group, headed by Congressman James G. Scrugham of Nevada, and including Harry R. Sheppard of California, recently made a trip of inspection along the coast. Although Scrugham could not give details, he pointed out as significant that a bill was recently passed by the House authorizing \$2,000,000 for an intensive search west of the Rockies for critical, strategic and deficient minerals to aid the war effort.

Newest addition to the western shipbuilders group is the King Shipbuilding Corp., which has recently filed articles of incorporation at Sacramento. The firm, which listed stock capitalization of \$200,000, had D. W. King and Helen Hurwitz of Newport Beach as the board of directors. The firm plans to operate in Orange county, Calif.

## HOW TO STAY IN BUSINESS:

# Manufacturers Study WPB Substitute Exhibit in S. F.

**H**OW TO STAY in business now becomes more of a problem than ever before. One of the most sweeping orders yet issued by the War Production Board—general conservation order M-126—came out last month. The list of products banned by this order took away from products going into civilian use, practically all iron and steel. The list includes virtually all iron and steel items ranging from bathtubs to pie plates; from cash registers to waste baskets; cigarette lighters to clock cases; mail boxes to fountain pens.

The M-126 order was logical. We could see it coming if we but took the time to analyze the news from Washington. It will be followed by others of a similar drastic nature affecting other critical material. Limited production under M-126 is permitted for 90 days after May 5. After that manufacture must stop—even for many items customarily used by the armed forces.

An old story but one which will bear repetition—and now with added force. The manufacturer of goods has three alternatives; get into strictly war production, find substitute materials to produce the line he is now handling or fold up and find some other line of endeavor.

Under M-126, to a limited degree, civilians can still have screws, nails, rivets, bolts, wire strapping or small hardware for joining and other similar essential uses.

### Wanted: Initiative

Talk to any overworked WPB man on the subject of getting small business into government work, and he will complain of the lack of initiative of many businessmen in going after war work. It is not as simple as just having the desire to get into war production. Ingenuity and perseverance are needed. In thousands of cases, the manufacturer must furnish the idea; show what he can do and how it will tie in with the major effort. As one government official put it: "We are not able to hand out orders on a silver platter; it is a case (for the manufacturer) of help yourself and use all available facilities."

WPB officials here in the western area have a stock piece of advice: "Keep away from Washington," they say. "Added and sweeping powers last month were given to representatives in larger cities making them miniature Donald Nelsons with full powers. Consult your local official and visit the subcontracting exhibits of WPB Contract Distribution branches which are held in many cities."

Consultation with local officials is not enough. They are courteous but busy and

can allot only so much time to consideration of each individual case. The manufacturer should furnish the idea; explore its possibilities first. Some revolutionary changes in production work have been evolved by ingenious manufacturers. A simple case. Officials of the Jay-Dee Manufacturing Co. of Redwood City, Calif. visited the San Francisco clinic. A Quartermaster bid was out for a quantity of machine gun scabbards requiring leather and metal. They teamed up with a producer of metal parts and secured a \$38,000 contract.

### Items Needed

Sub-contracting exhibits or clinics have a varied list of items shown by prime contractors who are seeking sub-contractors. A manufacturer interested in producing any of these items is asked immediately to submit a quotation which is passed on to the exhibitor. For military reasons, exhibitors are designated by code numbers. For items wanted by the Navy department, Quartermaster Corps, Signal Corps and Engineer Corps, the name of a manufacturer when he indicates interest is placed on a bidding list and he will be asked later to bid.

Obviously the great majority of small plants will be unable to get into war work. The all-important thing is then to look for substitute material to enable a manufacturer to continue to produce something like what he is now turning out. Soon we will be in a seller's market, with the consumer on the short end. Goods produced from substitute material will find a ready market as there will be no others.

As a generalization, here is what you *can't* have: rubber, copper, iron and steel, jute, tin, aluminum, kapok, zinc, tung oil and many others. If you are looking for substitute material, here is what you *can* have: wood, concrete, glass, petroleum, asphalt, vegetable oils, substitute fibers, paper and clay.

Strange as it may seem, we are today in a situation somewhat analogous to that of Germany which two and even three decades back was forced to seek substitute materials (and did with considerable success) when foreign markets were cut off and it had to sustain a war economy. Goaded by war's necessities we have already found many substitutes within a few short months. With native ingenuity and research we are probably on the threshold now of undreamed substitutes for materials to carry on the ordinary way of life.

Here on the Pacific Coast is being laid the foundation for cooperative effort to de-

vise and make available substitute materials from indigenous resources. Utilization of nearby natural products has the added attraction of freedom from long transportation hauls. The sub-contracting exhibit of the WPB Contract Distribution branch operating in San Francisco is the only one of its kind in the country. It is furnishing ideas for substitutes utilizing western natural resources. It is showing many exhibits of the successful use of substitute materials. Manufacturers are cooperating. They can come in for ideas and they are asked to furnish examples of the successful application of substitutes.

The San Francisco substitute exhibit is now not entirely a government project. Actively cooperating here are: the Western Research Laboratories, U. S. Department of Agriculture, Albany, Calif.; Forest Products Laboratory, U. S. Department of Agriculture, Madison, Wis.; Natural Resources Planning Board; the Asphalt Institute, San Francisco; California Redwood Association, Western Pine Association, the Douglas Fir Plywood Association, and many others.

As a practical example: western hardwood now bids fair to become a permanent substitute for eastern hardwoods which were shipped here in the finished products such as axe handles. Back in the days of the gold rush in California, the Forty-niners utilized and preferred western hardwood for pickhandles, axhandles, and many other uses. For some unaccountable reason western hardwood has not been utilized. It has been regarded as inferior. Government specifications for tools and other items using hardwood called for the use of *eastern hardwood*.

### Western Hardwoods

Recent research has brought out the fact that we have in northern California's Humboldt county a stand of 15,000,000 feet of mountain oak, an excellent source of hardwood. It has been used to produce tanbark. Accustomed to using eastern hardwood, nobody paid any attention to this source. It has been there all the time and now probably will be used. Here in the west, we have the pepper tree and the alder—possible substitutes for eastern hardwoods.

The San Francisco research fostering substitute materials is slanted along practical engineering lines. Working under Col. Frank M. Smith, regional director, WPB Contract Distribution branch, is Ray W. Hawksley, exhibit manager and in charge of the substitutes research work. He has given a lot of time to intensive study of what Germany has sought and achieved. He styles himself as "strictly an engineer." Educated at the Massachusetts Institute of Technology, he is a practical engineer and no theorist. An engineer for Columbia Steel Co. on the Pacific coast, he was loaned some months ago to the

government. Now he is working for Uncle Sam as that gentleman has indicated that he wanted full-time paid men to handle his important jobs.

The San Francisco substitute-materials work has three major phases: the use of wood to replace iron, steel and other items; the substitution of western grown fibers to replace hemp, sisal, jute, manila, kapok and wool; and substitutes from indigenous plant life to replace the common or urea-formaldehyde plastic materials. Chemicals to produce these are not available.

In the field of substitution of wood for metal, the clinic will furnish to manufacturers a list of several hundred items suggesting wooden buckets, garbage cans, poultry yard equipment and many other articles of every day use.

### Cloth from Bark

As possible and practical substitutes for hemp, sisal, kapok and wool products derived from redwood bark, the common milkweed, flax tow, the yucca plant and even asparagus fiber material is shown. Here also are casein, improved rayon and soy bean fibers. All these are not on the government's critical list. An excellent window screen using a plastic fiber is shown, replacing the usual metal window screen. The material is pliable, less likely to break and affords good vision.

For instance, a product derived from the milkweed plant closely resembles kapok. A coarse fiber derived from the yucca plant probably can be used for upholstery, or more important uses as a possible substitute. Rope men say that the idea of using yucca plant fiber to replace sisal has been discussed for many years and nothing has come of it. A purely experimental project to utilize yucca plant fiber is now under way. If successful, the backers hope to produce a fiber to make rope, sand bags, burlap, mattresses and upholstery. The Yucca Fibre & Products Co. recently organized in San Francisco claims to have secured rights to harvest the plants in the southwest from government waste lands.

The process of conversion is still the inventor's secret. Fiber as it comes from the plant is light green in color and bleached white with chemicals. Samples of the finished product on exhibition look like a very realistic substitute at least for upholstery and mattress stuffing. The inventor believes that rope and twine good for ordinary uses can be made. The rope, however, would not be suitable for marine uses as the fibers are affected by salt water.

Redwood tree bark available here in large quantities appears to have definite possibilities for new uses. Powdered, it may become the basis for plastic material. It is already being used commercially for making hat felts. It is claimed that it can be used commercially as an "extender" for wool. Using 50 per cent bark fiber and an

equal amount of "shoddy" or reclaimed wool, some good clothing material has been woven. It produces a rough fabric somewhat similar to tweed and those working on it believe that it can be used for work clothes, wind-breakers and mackinaws. One northern California woolen mill is actively considering going into production of blankets produced from redwood fiber and reclaimed wool.

For civilian uses, the common plastics are out and we must look to our own backyards to furnish the substitutes. All this is as yet highly experimental. The possibilities of redwood bark dust to produce plastics are being considered. It is claimed that the product has enough natural binder to make it stick together when put under pressure. Walnut shell powder is undergoing experiment to furnish plastics. One plant in southern California claims that it is making successfully water faucets from walnut shell powder. Plastic molders are now actively seeking substitutes to use in their regular dies and press equipment. Only recently plastics were evolved as a substitute for metals—now we must find substitutes for substitutes.

The use of wood which is replacing metal is now posing important problems for the glue industry. The ordinary casein glue is becoming scarce. Glue is important in the production of wooden furniture. The important western plywood industry

whose output is soaring uses huge quantities. Important experiments are already under way here for the production of the "keratin" or protein types. These it is claimed can be derived from animal hoof and horn, from hog bristles and even chicken feathers.

We are on the threshold of a vast development of substitute materials. The progress of the experimental work already under way should furnish ample food to stir the imagination of any of us to find substitute material.

### Livestock Loan Unit

Opening of a new livestock loan department, with headquarters at 25 New Montgomery Street, San Francisco, has been announced by Bank of America. Nucleus of the new department will be the complete staff and facilities of Bankamerica Credit Corp., former Transamerica Corporation subsidiary which was dissolved last week in further simplification of Transamerica structure.

According to L. M. Giannini, president of the Bank of America, the clients of the former Bankamerica Credit Corporation will continue to receive service from the same loan officers and field staff, through the new department of the bank.

• R. W. Hawksley, clinic manager (left), is showing a sample of California mountain oak to K. C. Weber, managing director of the Whitcomb Hotel, where the War Production Board's Subcontracting Exhibit is on display.



# WESTERNERS AT WORK

## Spokane Man Gets Top Honors

THE Chamber of Commerce of the United States looked to the West when, at the close of its annual meeting in Chicago April 30, delegates chose Eric A. Johnston of Spokane to head the nation's commercial organization for the ensuing year.



ERIC A. JOHNSTON

Vigorous, 46-year old Johnston, known for adequacy of speech and action, reported to members in his pledge to total victory that "free management and free labor will out-work and out-produce the regimented and whip-lashed labor of the Axis."

Johnston heads Brown-Johnston Co., electrical appliance and contracting firm of Spokane, where he has lived practically all his life.

It was in 1931 and 1932 when, as president of the Spokane Chamber of Commerce, Johnston crusaded for the first Coulee Dam appropriation. He was chairman of the Spokane County Welfare Board, overseer of Whitman College, chairman of the Washington State Progress Commission in 1937 and 1938, a trustee of the United States Chamber of Commerce, a director of the Seattle-First National Bank and a president of the Manufacturers Association of Washington.

He took a fling at politics in 1940 when he was a candidate for the Republican nomination for United States senator.

Earl E. Crowe, prominent for many years in the Los Angeles financial district, last month took up his new post as assistant general manager of Aircraft Industries Corp. at Grand Central Airport, Glendale, Calif. In his new position Crowe also will serve as vice president of Cal-Aero Acad-

emy, Mira Loma Flight Academy, Polaris Flight Academy and Curtiss-Wright Technical Institute, contractors to the United States Army Air Force and the British R.A.F. for pilot and mechanic training. Crowe served for several years as financial editor of the Los Angeles Times. Later he established his own investment firm, Dobbs, Crowe & Co.

WPB at Washington last month announced the following had been appointed to the Softwood Plywood Industry Advisory committee:

W. E. Difford, managing director of the Douglas Fir Plywood Association, Tacoma; Frost Snyder, president, Vancouver Plywood & Veneer Co., Vancouver, Wash.; E. W. Daniels, president, Harbor Plywood Corp., Hoquiam, Wash.; J. R. Robinson, president, Robinson Manufacturing Co., Everett, Wash.; Thomas J. Malarkey, vice president, M & M Woodworking Corp., Portland; Morris Sekstrom, manager, Olympic Plywoods, Inc., Shelton, Wash.; L. G. Opsahl, sales manager, Red River Lumber Co., Westwood, Calif.; Max D. Tucker, vice president and general manager, Evans Products Co., Plywood division, Portland.

R. A. Alexander of F. E. Booth Co. Inc. San Francisco last month was made a member of the executive committee of the Canners League of California. Previous members of the committee were re-appointed to office for the coming fiscal year, C. N. Lovegren, president announced.

Leslie A. Miller, former governor of Wyoming, has been appointed Denver Regional Director of the War Production Board. The Denver region includes the states of Wyoming, Utah, Colorado, and New Mexico. Part of the War Production Board's policy to decentralize operations, the establishment of the Denver regional office marks an important step in bringing the WPB closer to business men and industrialists in that area.

Appointment of Leo Schmitt of Reno as state director for the Office of Price Administration in Nevada was announced last month by Harry F. Camp, regional administrator at San Francisco.

A resident of Nevada since 1929, Schmitt will assume his new duties immediately. He has been in the real estate business since 1939, and during 1934-39 was in charge of liquidation for the Wingfield State Banks in Nevada.

Appointment of Leroy Palmer, Berkeley consulting engineer and former member of the State Mining board, as Engineer Consultant of the State Bureau of War Minerals Production, was announced by Bruce McDonnell, chief of the bureau in Berkeley.

Harry A. Saxe Jr., president of the Sterling Furniture Co., was elected president of the Retail Merchants Association of the San Francisco Chamber of Commerce, succeeding Carl Livingston who resigned to accept a commission in the United States Army. An executive of the firm of Livingston Bros., Mr. Livingston is also a veteran of the first world war in which he served as a commissioned officer.

Appointment of Clarence L. Johnston of the Sunset McKee Sales Book Co., Oakland, as a member of the Continuous Form, Autographic, Register & Sales Book Advisory committee of WPB has been announced.

Signal recognition of the abilities of a San Franciscan was given last month with the announcement of the appointment of Gerald E. Duffy, prominent railroad attorney as assistant to the president of the Atchison, Topeka & Santa Fe Railroad.



GERALD E. DUFFY

He will make his headquarters in San Francisco and by the appointment will be direct representative of President E. J. Engle on the Pacific coast.

Duffy has been commerce attorney for the railroad at San Francisco for 12 years and is being succeeded in this job by Starr Thomas of the Santa Fe legal staff. Only 43 years old, Duffy is one of the youngest

men ever selected to fill this important position.

The new appointee as assistant to the president takes over the job which was held for many years by **John R. Hayden**, who retired from 42 years' service with the railroad company effective April 1.

**John A. Royall** recently was elected president of the **Menasco Manufacturing Co.** at Burbank, Calif., to fill the post vacated by A. E. Shelton. Royall became affiliated with Menasco in April, 1941, when he accepted the position of vice president in charge of finance. In December, 1941, he was elected executive vice president.



JOHN A. ROYALL

Primarily, John Royall's career has been in the banking world, when he started with the Federal Reserve banks in 1915, working with them through 1926. Previous to joining Menasco, he spent twelve years with the California Bank in Los Angeles, first as credit manager, and later as vice president.

**Gail E. Spain** who has served as general sales manager of **Caterpillar Tractor Co.** with headquarters at Peoria, Ill. last month came to the Pacific coast. He has been elevated to a vice presidency of the company succeeding the late **D. G. Sherman** and will make his headquarters at the San Leandro, Calif. plant. **John Q. McDonald** who has been export sales manager at Peoria becomes general sales manager.

Appointment of **Jonathan Garst**, San Francisco, to represent the **WPB Materials Division in Alaska** was announced last month by William L. Batt, director of materials. Garst has been loaned to WPB by the agricultural marketing administration. He is regional director at San Francisco for the **AMA**, covering eleven western states. He formerly occupied a similar position for the Farm Security Administration.

Garst's duties will be to work with the bureau of mines and the geological survey

who are conducting an extensive survey of Alaska for deposits of critical minerals.

**J. H. Tuttle**, vice-president and treasurer of the Standard Oil Co. of California at San Francisco last month was elected to the board of directors of the **California State Chamber of Commerce**. Tuttle, who is a widely known California executive, has been connected with the Standard Oil Company since 1903, when he started as a clerk.

Six new directors, elected to the **San Jose Chamber of Commerce**, are: Norman Andrews, San Jose Water Works; Ernest Renzel, Jr., E. H. Renzel Grocers; Harold Gardner, Pacific Gas & Electric Co.; Dean Cole, Blake, Moffitt & Towne; Charles Hillis, Victor P. Hillis & Sons; and Al Bena, Call-Bulletin.

**A. H. Richards**, Regional Director Industrial Salvage Section for the eleven western states, announced at Seattle the appointment of **James O. Jensen**, former mining consultant from San Francisco, as assistant regional director of Industrial Salvage to be in charge of Washington, Oregon, Montana, and Idaho.

**Bernard F. Haley**, professor of economics at Stanford University for the past 18 years, has been appointed assistant regional price executive of OPA at San Francisco.

Professor Haley was head of the economics department at Stanford for ten years. He is on leave of absence from the university and will both assist and represent Norman Buchanan, present regional price executive in the OPA regional office.

Announced last month was the appointment of **Robert A. Lamoree** as Pacific Coast sales manager of the **Stauffer Chemical Co.** with headquarters in San Francisco. He also will handle sales for the following affiliated units: San Francisco Sulphur Co., Wheeler, Reynolds & Stauffer, American Cream Tartar Co., and Nicodust Manufacturing Co.

**Paul C. Wilmore** has been appointed head of the **General Electric Co.'s** newly established publicity department in San Francisco.

Last month, **Carl T. Colt**, vice president and general manager of the **Summers Mfg. Co.**, was appointed chairman of the **Los Angeles Chamber of Commerce Domestic Trade Committee**. He had served as a committee member for seven years and as vice chairman for two years. He succeeds Charles S. Thomas, who went to Washington, D. C., to become an executive in the U. S. Navy Bureau of Aeronautics.



L. S. KOENIG

Rotarians last month got together and elected **L. S. Koenig**, motor truck branch manager of the International Harvester Co. president of the **Los Angeles Rotary Club**. He and his corps of new officers will assume their duties on July 1. He has been active in Rotary circles serving in many capacities. He is now completing his term as vice president and program chairman; previously he served as secretary and as a member of the board of directors of the club.

Other officers elected to serve with Koenig during the coming year are: vice president—**Geoffrey C. Holly**, Pacific coast manager of Service Steel Co.; secretary—**Carl P. Miller**, president, Pacific Coast edition, The Wall Street Journal; treasurer—**James E. Shelton**, vice president Security First National Bank of Los Angeles; sergeant-at-arms—**James W. Bockman**, general manager, J. A. Bauer Pottery Co.; and **Herman F. Miller**, owner, The Stenotype Co. of California.

The appointments of **Clinton H. Hartson** as Chief Attorney for the Office of Price Administration for the State of Washington, and **William T. Laube, Jr.**, and **John B. Shelley**, assistant attorneys, were announced by Henry B. Owen, Washington OPA Director. Laube will serve as enforcement attorney and Shelley as price attorney.

**Leo F. Gentner**, formerly regional service operations officer for the Office for Emergency Management in San Francisco, has been named regional executive officer for the **Office of Price Administration**, it was announced by Harry Camp, regional OPA administrator at San Francisco. He succeeds Frank E. Marsh who has already assumed his new duties as assistant regional administrator for OPA.

## NAM REGIONAL CONFERENCES:

# West Now Producing Over 20% Total War Material

THE STATEMENT that the territory west of the Rocky mountains with 10 per cent of the nation's population had been called upon to furnish 20 per cent of the Nation's war material, as gauged by the total of war orders already placed, furnishes an excellent peg from which we can hang an imposing recital of the development of western territory. J. D. Zellerbach,



J. D. ZELLERBACH  
Regional Vice President

president of Crown Zellerbach Corp. and regional vice president of the National Association of Manufacturers did not miss this opportunity last month when in his address before the NAM regional conference at San Francisco he drew a fine picture of industrial development in the West.

The annual spring regional conferences started on the Pacific coast May 12 at Los Angeles, followed by the San Francisco meeting on May 14. Following in short order were conferences at Seattle, Portland and Tacoma. The meetings throughout were well attended, interest sharpened by the urge to discuss common problems brought about by war conditions.

Vice president Zellerbach did an impressive job of compiling facts concerning the development of industry in the West as a result of the war effort, all adding up to make the western states less dependent upon eastern sources for materials, supplies and finished goods. He pointed to the new steel plants allocated to western territory, "both as a concession to strategic necessity and in order to make this area largely independent of eastern mills." Looking to the future, he said "If we can be largely independent in war time, we can be largely independent in peace time too."

Attention was focused on the important implications of the allocation of new steel plants to the West by the statement that under the so-called Hauck ten-million ton steel expansion for the nation (adopted by SPAB—now defunct—in September 1941) 1,865,300 tons had been authorized for the West coast. Plants are already under construction.

Said realistic Zellerbach: "Our job (here in the West) is to work first for war production and second to solidify our newfound industrial strength. Hundreds of thousands of new jobs are being created in our West coast states. Today there are more workers employed in aircraft than in any other western industry. Before total plant capacity is attained, aircraft employment may reach 220,000. Shipbuilding firms will require at least 200,000 men and another deluge of ship orders may require even further expansion."



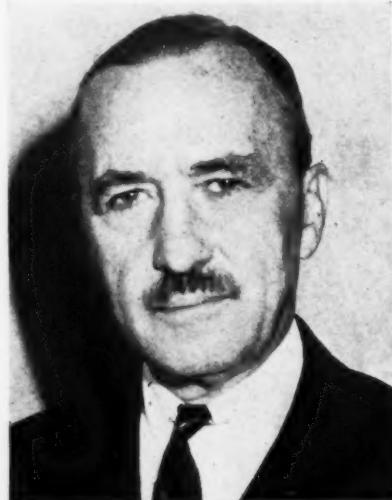
GEORGE LANGLOIS  
Heads NAM Office

"These two industries are here to stay. We must keep them alive . . . keep them strong . . . keep them growing. Billions of new dollars are poured into the Pacific coast to build a gigantic industrial empire—something we have all dreamed of—something we must coddle in its infancy so that it will stand firm for all time."

Zellerbach presented an imposing array of facts on the upbuilding of industry in the West—facts available to all, but lost sight of in the welter of war production news. His compilation of facts stressing the utilization of natural resources here was a balance sheet of the West. Summarized, the facts presented which are well worth retention for reference, were:

(Continued on Page 16)

KEEPING PACE with the swiftly moving war production program, William P. Witherow, president of the National Association of Manufacturers in his series of talks before West coast industrialists last month, enunciated some important policies with respect to industry, taxes, labor relations and industry's obligations to win this war of production. At San Francisco he presented an eight-point program designed to promote industrial harmony.



WILLIAM P. WITHEROW  
NAM President

Fresh from a nationwide tour of the country's large industrial-war plants, the NAM chief executive gave a magnificent picture of the progress of industry in the nation's war effort. Statistics on war production summarized are:

1. We will reach our goal of 60,000 planes this year. Back in March we built nearly 70 per cent more planes than in November preceding Pearl Harbor. In May we probably turned out as many planes as all our enemies combined. This achievement has been pioneered by the Pacific coast airplane plants.

2. We are already exceeding the Axis countries in tank output. One plant is seven months ahead of schedule and is tripling output.

3. We are now producing machine tools at the rate of 34 times the volume during the depth of the past depression and seven and one-half times the industry's normal volume.

4. During 1940 and 1941, the expansion of steel tonnage was close to 7,000,000 tons. This is only expansion but it is equivalent to all that Japan can turn out.

5. One company now makes more cartridges in a year than did all our plants combined in 1941.

6. In the last five months we have launched more than 140 ships—about one a day and this rate is increasing.

(Continued on Page 20)

# WESTERN INDUSTRY IN PICTURES



• Eastern officials of the National Association of Manufacturers are greeted upon arrival at San Francisco by western members. William P. Witherow, NAM president, is shown center (hat in hand), flanked right by W. B. Weisenburger, executive president. Reading left to right are: Albert M. Paul, California Products Co., Fresno; W. P. Jennings, Southern Pacific Co.; Almon E. Roth, president San Francisco Employers Council; R. S. Smethurst, NAM counsel; Harvey Saul, Industrial Relations NAM (coat on left arm); Weisenburger and Witherow; Irving Shields, Irving Trust Co., New York; Capt. A. E. Hewitt, former head of NAM San Francisco offices; J. A. Hartley, Braun Corp., Los Angeles; A. W. Eames, president California Packing Corp., San Francisco; and L. P. Ches, District Passenger Agent Southern Pacific Co.



• California shipyards are turning out vessels at a rate well ahead of that of the eastern yards. "Sideway" launching of the SS Steel Artisan at the San Francisco yards of Western Pipe and Steel Co. is shown above. Vessels of this type are being launched here with regularity. They are known as the C3-S-A2 cargo vessels.



• Supervisor Todd Oviatt uses portable fluorescent light which helps speed up production at the Lockheed Aircraft plant, Burbank, Calif. The fluorescent light is encased in a tube of transparent "lucite" methyl methacrylate resin. The unit is an aid to night shift assembly workers as it eliminates shadows in limited working area.



• Right: Albert M. Paul of California Products Co., Fresno (left), greets J. A. Hartley, president the Braun Corp. of Los Angeles upon arrival in San Francisco to attend NAM conference.

• Left: General Electric employees are being finger-printed voluntarily in response to a Navy department order that employees of companies holding naval contracts must be identified. Raymond M. Alvord, commercial vice president for GE in San Francisco, starts the ball rolling. Timothy Burke, inspector, S. F. Police Dept., is finger-printing.



# LABOR

AND THE INDUSTRIAL WEST

## Aircraft Plant On 6-Day Basis

**A NEW DEPARTURE** in the work calendar which appeared to have some merit is being put into effect at Burbank, Calif., by the Aircraft Accessories Corp., which is producing vital parts for southern California aircraft plants. A six-day work week has been adopted instead of the conventional seven-day week. Time, in the future, for this company at least will be a series of six-day weeks. Shop employees will work five days—rest one day. The day for each employee will change from week to week as far as the regular calendar is concerned, falling on Saturday one week, Sunday the next, and Monday the third week.

Said Randolph C. Walker, company president: The purpose of the plan is to keep our machine tools in continuous operation throughout the year and at the same time ease the strain of our production workers for the long hard pull that is ahead. We believe that the six-day week which provides 60 days off per year as compared with 52 under the seven-day week, will reduce fatigue which will mean more efficient production and more output per man while he is on the job.

The change will make it necessary to put on one new shop employee for each five and one-half men now on the payroll. Office employees are not affected.

## End Seattle Strike

Striking Seattle shoe repair men returned to work last month under a settlement netting them wage increases of 30 per cent. H. W. Klein, treasurer of the Shoe Repair Dealers Association was asked if the increase would be passed on to the public, and he replied that it would not be inasmuch as the dealers view prices as frozen as of last March by government order.

The increases raised all-round first class men to \$50 a week. Jackmen and other major classifications will receive \$45 a week.

The United Automobile Workers Union, CIO, last month filed charges against the Douglas Aircraft Co. of Santa Monica and Long Beach, Calif., accusing the company of violating a government order to cease

discouraging membership in the UAW. Charges were filed with the Labor Board by William B. Taylor, a director of the union, who said that the company had discharged William A. Gillespie, president of the Douglas Local 17 and had refused to reinstate him at the request of the union.

Members of the Marine Firemen, Oilers, Watertenders and Wipers Union, (independent) last month ratified the recently concluded wartime labor pact with the War Shipping Administration freezing wages and other provisions of existing collective bargaining agreements for the duration of the war. The San Francisco local of the union voted against the agreement but the pact was carried overwhelmingly in the ports of San Pedro, Seattle, and New York.

The War Labor Board last month had up for consideration the wage and hours dispute between the interstate truck line operators and the AFL International Brotherhood of Teamsters, Chauffeurs, Warehousemen and others. The dispute is between the union and the Utah Motor Transport Association of Salt Lake City. A proposed strike was called early in May

but delayed by negotiations and finally by a government order to "maintain the status quo."

## Lockheed Studies Vitamin Benefits

Lack of proper vitamins is causing the loss of thousands of man hours yearly in defense industries.

One thousand Lockheed aircraft workers at Burbank, Calif., started on the road to better health when they placed themselves in the hands of medical and nutrition experts of the National Research Council and began taking a course of vitamins that is expected to give them better vision, reduction of fatigue and a generally improved physical condition.

Under the supervision of Dr. H. Borsook of Caltech, nationally famous nutrition expert, the council is conducting the experiments to determine the state of nutrition among industrial workers as a first step toward improving the national health through improvement of the national diet.

The 1000 Lockheed men volunteered their services as human guinea pigs and recently submitted to strict physical examinations before starting their vitamin courses. Besides giving a detailed report of their medical history they also had to furnish a complete account of their diet background in order that Dr. Borsook and his large staff could discover what vitamins were lacking in their regular diet.

These men will not change their regular eating habits at once, but will be fed certain vitamin tablets to build their general health up to what Dr. Borsook considers should

• Bicycle racks now are part of every airplane factory's backyard in Southern California. Shown above are employees of the Douglas Aircraft Co., Santa Monica, Calif., plant going off shift. Bicycles were purchased by the company and sold at cost to employees.



be normal. The volunteers will receive this free nutritional supplement for six to nine months. At the end of the testing period they will be given a second physical examination to determine the extent of improvement in general health. At the end of the survey the volunteers will be told how they can maintain a good nutritional status by eating a balanced diet of ordinary foods without having to resort to special vitamin tablets.

### Unique Appeal

Unique procedure of an appeal by organized employers to organized labor authorities to join in asking the Secretary of Labor to certify a labor controversy to the War Labor Board for a decision developed last month in San Francisco. The request was sent by Almon E. Roth, president of the San Francisco Employers Council to John F. Shelley, president of the San Francisco Labor Council. The request was in relation to failure of negotiators on both sides to reach an agreement in the controversy of the Elevator Operators' and Janitors' unions and some building owners.

The movement toward formation of unions of municipal employees was extended last month when city employes of Ontario, Calif., moved to organize the Municipal Employes Union. City employes had been asking for pay increases, adjustment of working conditions and inauguration of a civil service program.

There were 512,000 persons in the three Pacific coast states (Washington, Oregon and California), working on farms at the beginning of last month of which 310,000 worked in California. The figures were released by the Bureau of Agricultural Economics which pointed to the fact that aggregate number had increased 47,000 over April. California farm employment was up 35,000. Part of the increase was due to seasonal considerations with the new crops coming in, though farmers reported that they were securing new help from local towns. Farmers generally continue apprehensive over competition from the strictly war production industries.

The National Labor Relations Board last month ordered a collective bargaining election held by June 7 among pattern makers and their apprentices in the San Pedro yard of the Los Angeles Shipbuilding & Dry Dock Co. They will vote on whether they wish to be represented by the Pattern Makers Association, AFL, or the Industrial Union of Marine and Shipbuilding Workers, CIO, or neither.

To a man  
with wire rope  
to lubricate

Dear Sir:

It's your job to lubricate wire rope. You give a lot of thought and consideration to the lubricant you use. We know that. We also know that when new ways of lubricating wire rope are discovered, you'll want to know about them. That's why we want to give you all the facts about Unacal Cable Lubricant. It works on an entirely new principle.

Most wire rope lubricants work from the outside in, and fail to reach the inner strands where wear takes place. But Unacal Cable Lubricant works from the inside out and lubricates all the way through!

The secret is a volatile "carrier" that penetrates to the core of a cable, evaporates, and leaves the lubricating properties where they are needed most...on the inside! Then the lubricant works out around every strand, protecting it from friction, rust and wear. Furthermore, Unacal Cable Lubricant will stay on under extreme high speed or low temperature conditions.

SO PLEASE DO THIS: Ask your Union Oil representative to give you a demonstration. See for yourself how this unique cable lubricant lubricates all the way through. Notice how clean the outside remains. Be sure to call him today!

Yours truly,

UNION OIL COMPANY

## Zellerbach—

(Continued from Page 12)

The mineral industry of the West—copper, gold, silver, lead and zinc leading in importance, account for about 60 per cent of the total value of the nation's output. We also have coal, petroleum, natural gas, molybdenum, tungsten, magnesium, and others.

### Magnesium

In 1939, this country produced less than seven million pounds of this newly-important metal. (180 pounds of this metal can do the work of 270 pounds of aluminum in an aircraft engine.) This year we will probably produce 125 million pounds and need still more. Before Pearl Harbor, planned output was 400 million pounds—the goal is now almost double. Formerly, magnesium was valued chiefly for its pyrotechnic qualities. Now it is a must for war production with wide peace-time applications. On the west coast huge magnesium reduction and processing plants are in operation or being constructed in Nevada, California, and in the Northwest. One plant alone when in full operation will account for 16 per cent of the total planned domestic capacity. Magnesite, the basic ore, is available here in quantity.

### Manganese

Vital and now critical material with some high-grade deposits in the West. Hitherto, we have imported 97 per cent of our requirements. Montana has been our largest domestic producer with 19,343 tons in 1940, an increase of 84 per cent over 1939. New Montana producers alone have contracts for over 400,000 tons. Fortunately new methods have recently been developed so that even low-grade ores can be treated and brought to a high metallic content to be used successfully. About 12½ pounds of manganese are needed for every ton of steel produced. The government war program calls for a huge increase of output—quota set for the eight western states amounts to 60 per cent of the total.

### Steel

Largest single industrial development in the mountain states resulting from the war effort is the new iron and steel plant to be built at Provo, Utah, to cost between \$126,000,000 and \$135,000,000, equal to the cost of the Hoover dam which was under construction for nearly five years. In Iron county, Utah, iron ore in the form of magnetite containing 55 per cent iron is found in quantity. Ample coal supplies are available in Carbon county and elsewhere.

Steel production is coming to the fore in southern California and new blast furnaces and rolling mills are already under construction near Fontana close-by to San Bernardino. It is developing a hitherto untouched iron deposit from the nearby mountains.

### Aluminum

Not a new metal, but the quantities now desired and the uses to which it is being put offer a new development. Aluminum reduction plants and rolling mills will dot the whole Pacific coast area from southern California to Washington. Our nearby deposits easily will supply all our ore requirements if need be. (Production of aluminum from alunite ores is a new development. Having been tested successfully in a pilot plant, production should start this year in a new plant being erected in the Northwest. Bauxite which comes from the Dutch West Indies and in smaller quantity from Arkansas is the basis of our present supply.) One western alunite deposit is estimated as sufficient to sustain an annual production of 60 million pounds of aluminum.

### Tungsten

Formerly imported chiefly from China has become an urgent need. Our consumption has increased five times since World War I. We have embarked on a program

for increasing our output to a self-sustaining level. California leads in output exceeding Nevada which however has the largest deposit of tungsten ores available in this country.

### Vanadium

Used principally in the manufacture of special alloys, steel and iron, is available in Arizona, Colorado, New Mexico and Utah which supply it in quantity. Mercury is used not only to show the temperature but is a war necessity. California leads in production with Oregon second and Nevada third.

### Coal Mining

Coal mining, a fundamental of the steel industry, is a fair activity of the mountain states. Washington also has deposits which may be developed further. Western production is but 4 per cent of the nation's total. This we should explore and develop even though gas firing has been developed for steel furnaces where it is considered by some as satisfactory.

• *It may be propaganda, but here's one good way of telling employes that caution may serve to make the enemy unhappy. Plants doing war work warn employes through a series of posters placed in prominent spots. Helpful hints as shown on the poster are given below.*



**FROM WASHINGTON, D.C.:**

## **Far West Finally Has Decisive Voice in OPA**

*By ARNOLD KRUCKMAN  
Associate Editor*

**W**ASHINGTON, D.C.—The Pacific West has had a decisive voice in formulating those OPA price ceilings. It is characteristically a breezy voice. There is no more direct individual in the whole war government than Dr. Dexter M. Keezer, president of Reed College, Portland, Oregon.



They call him Dr. Keezer, here, but apparently he is rather impatient of that pontification. Dexter Keezer, not unfamiliar to Washington, has that vigorous indifference to red tape and polysyllabic speech which marks the Westerner apart from the deliberate Eastern savant. Keezer is typical of the men who brush aside the unessential and cut through to the heart of the matter. It is refreshing to see him in action here. He is the least glassy-smooth of the academic crowd who head the OPA. And it is probably true to say he is most American.

The OPA is run by three men. There is Leon Henderson, the Administrator, born in New Jersey, but despite his Falstaffian indifference to subtlety, he makes you think of those huge individuals who come out of the ancient East. You could put a robe on him and persuade yourself you are looking at Buddha. He is blunt-textured in mind, vast in girth, pallid in lack of color, and has foreign-looking dark eyes. He wears ill-fitting suits, his collar usually is wilted, and his trousers always sag slightly at the belt. And he always finds the shortest and often the least printable word to say what is in his mind. But you never feel you know all that is going on behind that forehead, and you feel a force, like a force of nature. In a perfectly natural way he has an enormously frank opinion about the truly unusual qualities of Leon Henderson. And he is one of the men thrown up by these tumultuous times who will loom larger and larger. You can't avoid the thought that he is gradually crowding other big figures from the center of the scene. For weal or for woe, it seems certain that the man Henderson will play a very big part in the future of America. Watch him.

The next in line is Dr. J. Kenneth Galbraith, Deputy Administrator. You might

call him the senior deputy. He is a Canadian by birth, Scotch-Irish ancestry. Cau-tion is his second name. Tall, rangy, six-foot something; bold, large, and clear-cut features; quizzical grey eyes, and drawling, reluctant, and repetitive manner of speech. Despite the monotony of his tone and the absence of color in his presentation, he

**One of the best-informed writers at the Nation's Capital, Arnold Kruckman, presents each month authoritative comments on political developments and their practical application to industry of the West. Any reader who wishes additional information may write to him directly, using business letterhead, at 1120 Vermont Avenue, N.W., Washington, D.C. Inquiries will be answered free of charge. You also are invited to contact him personally in Washington. Copies of pending congressional bills may also be obtained free of charge.**

leaves you with a liking for his personality and confidence in his essential soundness. You feel if he had rubbed off some of the cloistered scholasticism he might have made a very good business man. He is the typical economist produced by the schools.

Undoubtedly Galbraith is the brake. Henderson has provided for himself. He is the sort of man nature made for a thoroughly reliable second-in-command. You sense his cool soberness has probably checked many erratic OPA enterprises. But fundamentally he is New Dealer, a profound believer in a new order for the underprivileged, a specialist in gearing the world to more cooperative living.

Keezer is the other Deputy Administrator. He is utterly unlike the other two except that he carries the indefinable stamp of the man who deals with youth in classes. Keezer, 47, is attractively homely. He is apparently the junior in age as well as in rank. And there is a clear distinction about his personality. If he hasn't been the Commander of his American Legion Post he should have been. He has all the facets of a good American Legion Commander. They tell you here that Keezer is the analyst in this group of economists. (All three classify themselves as economists.) A good analyst is usually a good synthetist.

Keezer was born in Massachusetts, served in the World War as Captain in a machine gun battalion, and took some of his scholastic degrees in absentia. He studied at Amherst, Cornell, the University of Paris, and began working life as a reporter on the Denver Times. We know him here because he was attached to the Scripps-Howard Washington Bureau for several years, and went from there to become associate editor of the Baltimore Sun, one of the most notable dailies in the United States. He is a very real newspaperman. And he married a very real newspaperman's daughter. The former Anne Mellett is the daughter of Lowell Mellett who has had a distinguished career in the Scripps-Howard service.

You may know Mellett as the head of the President's U. S. Information Service. This is the government agency which lately has locked horns with Congress. It built itself a conspicuous edifice at one of the most prominent spots on Pennsylvania Avenue, the most prominent boulevard in the capital, without asking Congress for permission to use the property or for permission to spend the money. Mellett generally is supposed to be conducting an information service that has its greatest value in the information it furnishes the President. Congress has never been able to determine just what this information may be.

Mellett is a slim, gray, silent, razor-keen sort of man, who apparently is utterly sold on the philosophies of the New Deal, and who is devoting himself with a sort of monastic single-mindedness to the service of Mr. Roosevelt. In his way he is just as necessary to FDR, and as close to the Roosevelt family, as is that more conspicuous lieutenant, Harry Hopkins. While Harry does not dodge the publicity and is a rather positive force, Mellett is like a gray ghost whom few know and whom few see, and whose negative influence at the White House must be enormous. He does not live there like the spotlighted Hopkins, but he probably, relatively, is just as much in the President's company and confidence. There is something in this aloof shadow life, this deliberate submergence of identity to the advantage of another, a sort of asceticism and abnegation of self, that stirs one to a cool respect.

All this, naturally, should mean much to you people in the Pacific West. With Keezer as one of the forces that mold and guide the terribly important OPA with its price ceilings, and with Keezer's close relationship with this powerful influence in daily contact with the head of the government, the Pacific West is not far from the White House or the strange shifts in process.

Meanwhile, let us examine this OPA. There are many business men, industrialists, men who have headed important

commercial organizations, in the OPA. But the curious fact is that these men are wholly subordinate. OPA functions upon the problems of business and industry, but it is conducted wholly by the specialists like Keezer from the schools. A western industrialist who is in the OPA organization here said the other day he had never met the heads of the organization any closer than when they were on the platform and he was in the audience below. The statement is curiously illuminating.

The business man, as such, apparently does not participate on an equal footing in the OPA councils that plan his future. They call him in for consultation and decide about his advice after he is dismissed. It was the same businessman in the OPA who remarked that in the more normal days business employed the specialists from the schools and the laboratories to give their counsel; the man in business adapted what he could use to the realistic purposes of business. Today, in OPA, the specialist from the schools and the laboratories heads the government enterprise and employs the

businessman for his counsel and adapts what he may find useful to his program. The whole process is reversed. It is strikingly symbolical of the change that is represented by the whole OPA price ceiling idea. In effect it is a purge. It will largely eliminate the wholesalers and jobbers, and shrink the number of manufacturers.

### Profits Are Out

Bear in mind the manufacturer for the next two to five years is expected literally to forget profits, to produce at cost as a patriotic service. Already a number of manufacturers have quit, not because they lack patriotism but because they see the bright red splash of deficits. And they see a strange and uncertain path ahead. They tell you here that two-thirds of the nation's industry will be engaged upon war work within a few months, and that the civil production will be slowed down to the pace of 1932 with its slightly plus \$3,000,000,000 national income.

OPA expects at least 32,000,000 persons will be drawing their support from govern-

ment funds soon, which means at least 64,000,000—almost half the population—will depend on the Federal Treasury for their living. And this does not include soldiers, sailors, and other similar services. Keep in mind also, to police these OPA price ceiling regulations will require a small army of enforcers. Henderson told a congressional committee the other day he would be obliged to employ from 90,000 to 100,000 persons at a cost of \$250,000,000 a year.

There is still a lot nobody knows about this price ceiling business. It was Dexter Keezer who said the current slogan of OPA should be, "I don't know." Broadly, this is the idea. Prices have been fixed at the level that was highest in March. But if you need fresh stocks, and legitimate costs have hoisted the prices, you may not increase your selling prices. What do you do? If you are a retailer you will be able to pass the "squeeze" back down the line. We have a new act, a foreign act, brought from Britain, we call "the rollback squeeze." It means they "rollback" the "squeeze" or increased cost, from the retailer upon the wholesaler, the jobber, the manufacturer and the raw material producer. When they reach the point where the "squeeze" presses the life out of them, OPA plans to provide a subsidy to absorb enough of the squeeze to keep manufacturers—mark, manufacturers—alive. You get the subsidy only if what you make is absolutely essential. Serviceability determines whether your product is essential.

### Right to Survive

Serviceability and essentiality will spell the life or death of many factories and merchandising establishments in the near future. Someone has suggested the squeeze immediately ahead may be as much as \$4,000,000,000. They illustrate the stupendous magnitude of the potential subsidy by pointing out that a coal subsidy in New England is running at the rate of \$40,000,000 a year. Multiply that by the area of the United States, and by the hundreds, probably thousands, of commodities necessary to support the public welfare, and you can get a glimmer of what it may mean to put the national economy on the dole.

The OPA price ceiling schedule applies to wholesalers and jobbers and to manufacturers by logical sequence. Deliveries must be made at the highest March prices even if a contract made earlier calls for a higher price. You may not slim down size or quality or serviceability without making a corresponding cut in price. Chain stores may not make maxima as a group. Each store must make its own. The date the regulation went into effect every wholesaler and retailer was automatically licensed. Each new establishment is automatically licensed when it opens its doors. The license enables OPA to shut the place

- Aluminum—64,000 pounds of it—will be used for bombers; and it all will come from the junked "City of Salina," the first all-aluminum streamliner. The train is shown (above) in the dismantling yards. Below is shown the "City of Denver," one of Union Pacific's new all-aluminum streamliners.



if it violates the regulation. No store may operate without a license. And violations may cost \$5,000 and a year in jail. If the customer demands, you must give him or her a slip or receipt with the date, name, and address of the store, the item, and the price. You must explain the reason for your price for anything to anyone who asks. It is quite possible you may legitimately price your article higher or lower than the man next door prices the same article, if your highest average for March was different from his. You are required to place prices conspicuously on the articles you sell. You must keep records in detail, and you must keep these records ready for examination by any person who makes the demand. If you had no actual sales in March to establish a highest price, you must use your offering price as the yardstick.

### OPA Ceilings

OPA ceilings take precedence over Fair Trade laws or Unfair Trade Practices laws of the various states when the state minima are not higher than the OPA ceilings. In other words, OPA price ceilings are controlling when they are highest. The highest March price prevails. If you are able to shave your price by making a simpler package, that will be agreeable to OPA. It is not required to advertise ceiling prices over the radio, in newspapers or in show windows. Order No. 133 parallels the General Maximum Price Order by fixing a similar price level for guidance of the 34,500 retailers who sell farm equipment.

Manufacturers are not licensed. Wholesalers are licensed; but wholesalers who also manufacture, or assemble, become manufacturers and are not licensed. They know here that the price control regulation has flaws. They acknowledge they have not yet found a way legally to enforce their demand that standards be maintained. They fear this will mask price increases and lower national living standards. The effect on the manufacturer is not expected to be palpable until the retailer finds his shelves empty. Then it is anticipated, in Fall, retailer, consumer, everybody concerned will raise an angry uproar. They still fear public sentiment here. And they fear this may conceivably come before the Fall elections. If it does, the turmoil will affect the ceilings. And many have an astonishing bearing on the result of the elections. After the elections is the period when you may expect extraordinary activities in price ceilings, and in the whole OPA structure.

The tin used in a single automobile, about  $3\frac{1}{2}$  pounds, would make eighty No. 2 food cans, or enough for a whole year's allotment of tinned food for a U. S. soldier.

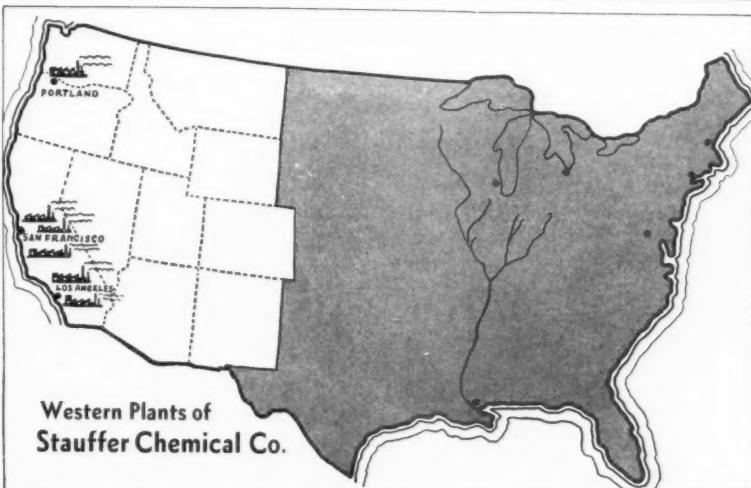
### Armor Plate

Our new method of producing armor plate by casting in molds replacing the old method of shaping it through rolls under thousand-ton pressures has made possible our huge tank output which is now exceeding the combined output of the Axis powers. This country started to work on the process two years before Pearl Harbor but we never really got started. At least one of the Axis powers is using the casting method.

A few of the details were revealed guardedly last month in San Francisco by William P. Witherow, president of the

National Association of Manufacturers and head of the Blaw-Knox Co. of Pittsburgh, Pa. His company is in the paradoxical position of producing armor plate and also guns for piercing armor plate.

This country has been in volume production of cast armor plate for months. American produced tanks operating in Libya were using it. Formerly only three large companies produced armor plate—now there are upward of 30 in quantity production. As our rearmament program got under way a year ago we had set a certain goal for production of armor plate. This goal has been increased 80 times and we are keeping ahead of schedule.



## Nation's Bright Spot in Chemicals • • • the PACIFIC COAST!

**Due to the rapid growth of industries in the West, the Pacific Coast has kept pace with the heavy demand for chemicals. Result—the chemical situation is now more favorable on the Pacific Coast than on the eastern seaboard.**

**STAUFFER has kept ahead of the increasing demand for chemicals by establishing and operating eight major plants, from Portland to Los Angeles. This means better products . . . better service for our customers in the eleven Western States . . . and behind this rapid industrial expansion is the Stauffer "Victory Equation"—**

**Quality + Experience × Service = Dependability**

LOS ANGELES



SAN FRANCISCO

**STAUFFER CHEMICAL CO.**

## Witherow—

(Continued from Page 12)

As representative of the large segment of American industry, Witherow brought association policies up to date as follows:

### Taxes

The single objective of "will it win the war?" led the NAM to advocate taxation down to the survival limits for industry. "We take pride in the fact that we were the first spokesmen to advocate such levies on ourselves." Industry will pay every penny of taxes it should in order to share equitably in the sacrifice a war of survival entails."

### Patents

It is the desire to win the war that leads NAM to advocate that all patents be made available to any war producer upon a reasonable royalty basis. This can be done under legislation passed during World War I. It does not necessitate wholesale modification of our basic theory of patent systems, a change which is now being advocated in some quarters in Washington. Such legislation is not needed to help win the war.

### 40-Hour Week

Winning the war is the philosophy that leads us to question the wisdom in retaining the forty-hour week at this present time.



W. B. WEISENBURGER  
NAM Executive V.-P.

It may be perfectly true as some staunch supporters of the law maintain, that its primary effect is solely to increase costs and not to prevent men working more than 40 hours.

Many companies have hurdled the problem by working men only 40 hours and utilizing more shifts to keep the production line in motion. This is possible so long as there is an adequate supply of man power. It may be a fatal deterrent to our war effort as army inductions increase and as war industries expand, employment by the estimated "more than 100 per cent" by the end of 1943. Paul V. McNutt, director of Man Power Mobilization, says that 10,500,000 additional persons will be employed in war production during the coming year. This means intensification of training programs in industry.

It is the job of a corporation officer to see beyond the implications of the moment, to the over-all importance of maintaining the democratic institution of free enterprise; to work with labor in the fullest sympathy, realizing that there can never be free enterprise with controlled labor or free labor with controlled enterprise.

It is of vital interest that more democratic labor unions be maintained; that labor be not exploited by either capital or its own leaders. Unions require virile leadership and can promote the competitive existence of labor organizations without leaning on government or participating in politics.

### Wagner Act

Industry has not—and does not now urge repeal or suspension of the Wagner Act. Industry has been willing to forego needed amendments to the Act until this war is won. And not only that—members of the NLRB which administers the Act, have applauded publicly industry's acceptance of collective bargaining and have pointed to the sharp decline in complaints of alleged violation of that law in confirmation of their conclusions.

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**WARTIME PRODUCTION PLANTS NEED SYSTEM TAGS that Speed and Control MEN, MATERIALS and MACHINES!**

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## Steel Man In Aircraft

TWO of the nation's outstanding aircraft companies, Consolidated Aircraft Corp. and Vultee Aircraft, Inc., have become aware these last few months that they are under scrutiny by a new pair of eyes—the eyes of Tom M. Girdler.

The sight of Tom Girdler ambling down a production line at San Diego or Vultee Field near Los Angeles, pausing

at the end of the steel industry and was formerly associated with Girdler.

The Republic Steel chairman comes to the aircraft industry under no false pretense. The blunt, hard-hitting executive makes no claim to technical knowledge of aircraft manufacture. Above all, Girdler knows two things: men and organization. These two ingredients are pretty much the same in making steel, aircraft or safety pins.

At the age of 64, most men are looking for a quiet spot to coast along and rest their weary bones. Tom Girdler at that age is looking for more action.



T. M. GIRDLER

here and there to banter with a workman, is an old one in the steel industry, but new in aircraft production. Moreover, to those who know the record of this stocky executive, it is an exceedingly happy omen.

For the new chairman of Consolidated and Vultee, the jump from steel to aircraft is not as long as it might seem. Girdler has been a director of the Aviation Corp. for several years which owns approximately 75 per cent of the common stock of Vultee which in turn owns 34 per cent of the common stock of Consolidated.

A few weeks before Pearl Harbor, Emanuel and his associates had been trying to persuade Girdler to take charge of the newly merged aircraft units. A merger of this proportion needed a top man to get it in running order. Girdler had a man-sized job of his own as chairman of Republic Iron & Steel, a post which he still retains. The day following Pearl Harbor, Girdler was in the aircraft business. He telephoned his acceptance of the job.

As a result, Girdler moves into the Vultee and Consolidated picture, well acquainted with the men on the spot. Harry Woodhead, president of Consolidated and former chairman of Vultee, also is a prod-



## What'll you have... 8 OUNCES...8 POUNDS...OR 8 TONS?

CAPACITY and the "know-how" are the important factors in the production of quality forgings for your application.

Capacity is determined by the plant facilities, the "know-how" comes with years' experience in handling all types and sizes of jobs. At Western Forge you get both. Whether you need an 8 ounce forged bolt, an 8 pound coupling ring or an 8 ton anchor, at Western Forge you'll find the experience-built skill and capacity to handle the job right.

**UNCLE SAM comes first! Strict priority for war production has, on occasion, made it necessary for us to ask our regular customers to wait for delivery. We want you to know that your cooperation in this respect has been greatly appreciated...and that we are doing everything in our power to speed the work along. Our capacity, already large, is being increased steadily by uninterrupted production and addition of bigger facilities. We would appreciate your suggestions and stand ready to help with your problems in every way possible.**

George J. Krusw, Jr., Manager

**WESTERN FORGE**  
AND TOOL WORKS  
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**SPECIALISTS IN QUALITY STAINLESS, ALLOY AND TOOL STEEL FORGINGS**

## SYNTHETIC RUBBER:

# Proposed Solution For Western Tire Shortage

WE HERE on the Pacific Coast should have a greater appreciation of the seriousness of the rubber situation and what is likely to happen if automobiles cannot be used, than the average person. For in these wide open spaces, the automobile has helped build up the cities. Many of the western cities attained their stature in the "automobile era."

The local Chamber of Commerce in cooperation with the California Railroad Commission is now making an important survey of the transportation situation in Los Angeles and surrounding areas. Some interesting facts have already come to light. Los Angeles residents are dispersed eight times as widely as those of New York City; six times as widely as those of Chicago.

The thousands of employees of the six major aircraft plants in the Los Angeles metropolitan area still travel to work in their jalopies. Bicycles have displaced a small part of the normal automobile-employee traffic but hardly likely to provide a solution for the problem.

Not exactly typical of all Pacific Coast cities but here is the situation in Los Angeles developed from the preliminary phases of the survey: 55 per cent of those entering the downtown area reach there by automobile; 70 per cent of the industrial workers travel to their work in automobiles.

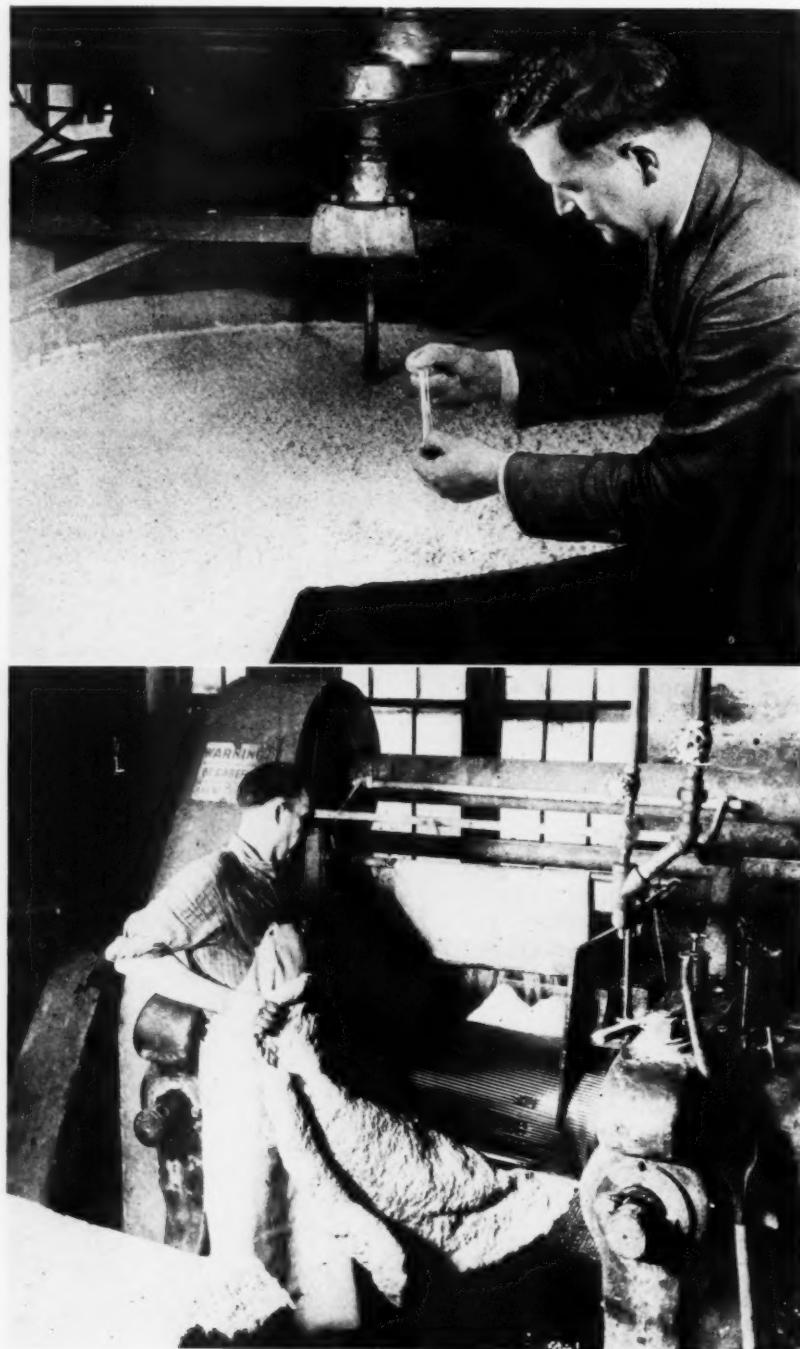
Washington officials are unable to agree on the facts or possibilities relating to the alleviation of the rubber situation through production of the synthetic article. At any rate it looks now as if we cannot look forward to any real alleviation of the situation in 1944. Jesse Jones, head of the RFC, which is financing the building of synthetic rubber plants recently came out with the statement that by 1944 we would have an output of 700,000 tons by that time—about enough for a normal year's consumption based on 1939-40 figures.

The RFC has announced that a \$15,000,000 synthetic rubber factory has been allotted to the Los Angeles area. Two others are in the offing, to be located in that area, and all to produce the butadiene or buna rubber synthetic type which has petroleum as its base. Greater part

of the new synthetic rubber production set for this country will produce this type. There are, however, three other broad types of synthetic rubber: thiokol, neoprene and butyl and each has particular adaptation for certain kinds of usage.

Here is our situation: we have been using half of the world's total output of rubber every year and 98 per cent of all rubber comes from the Far East. The late Marquis of Salisbury admonished Englishmen "to study maps." To understand the geography of rubber, we must also consult maps.

We have been using rubber at the rate of 766,000 tons a year. Last year we imported 1,025,000 tons, of which large amounts were placed in what are called "stockpiles" against emergency. And we now have the emergency.



• Oil, soap and natural gas are used to prepare Ameripol, B. F. Goodrich Co.'s synthetic "liberty" rubber. Above, the raw product is shown in the coagulating vats. Next, it is broken up and sheeted on a wash mill. Here, lumpy material is squeezed into thin sheets which are cut to a standard size and dried.

From Malaya came 550,935 long tons or 54 per cent of our importations. Malaya is now in the hands of the Japanese.

From the Netherlands East Indies came 367,373 tons or 36 per cent of our importation. From Ceylon we imported last year 59,804 tons or 6 per cent of our importations. East Indian sources such as Burma and Thailand helped supply the balance of our needs. We got about 1 per cent of our annual importation from Africa.

Most of the rubber we imported went into automobile tires. This country has one-third of all the improved highways of the world and our 30,000,000 pleasure cars and 4,000,000 trucks and buses drive an average of 500 million miles a year.

World production figures tell the story of how we have been dependent on the rubber tree, Hevea Brasiliensis, native of the Amazon valley and transplanted to the Far East. The 1940 world production figures are: The Far East 1,353,052 long tons, Amazon valley 17,661, Africa 16,431, and Mexico (guayule) 3,634 tons. This country produced a very small amount of guayule, less than 1,000 tons.

It is estimated that 90 per cent of war workers now travel to and from their jobs in automobiles. Towns and cities through the long years when nobody imagined that rubber might become a problem have substituted buses for their local railway transit systems. The increasing competi-

tion of highway buses and privately owned automobiles contributed to the curtailment and even to the abandonment of railroad facilities in many areas. These facilities—street car lines and branch railroads—cannot now be restored nor can existing railways absorb any major share of the transportation burden.

The pooling of the facilities of private cars has made considerable progress in bringing war workers to our factories and shipyards. In Southern California where the aircraft plants are located within a radius of 25 miles, workers pool their automobile resources and five and six now ride to work in the one car that formerly carried a lone passenger.

### Construct War Plant

Commander J. A. Scoville of the U. S. Navy, announced that construction of the new \$21,000,000 navy gun relining plant to be located north of Pocatello, Idaho, had gotten underway. Using 160 acres, the entire plant will be surrounded by a hurricane fence. Work will start first on the construction of the necessary barracks and mess halls to accommodate employees. When the plant is in full operation, it is expected that more than 600 men will be employed turning out vital war work.



• Here is Ameripol, the B. F. Goodrich "Liberty Rubber," capable of replacing rubber for most standard manufacturing operations. The corrugated surface is imparted by the mill roll. At this stage it is flesh-colored, but after a final drying becomes amber like natural crepe rubber.



## This Plant dedicated to accurate and precision gears

Since 1905 the Johnson Gear Company has been working with the steadfast purpose to improve the art of making fine gears. In step with this policy the J.G. plant is equipped with the most modern gear-cutting equipment. Some of our craftsmen have made gears their life work and their loyalty to this service contributes in a great part to the accuracy of our products. For special or standard gears, you will find complete satisfaction in Johnson Gear Company's service.



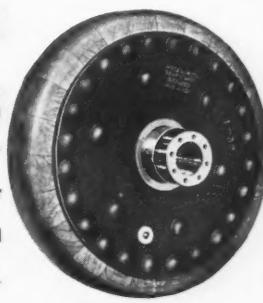
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- ★ Take heavier loads than iron or rubber wheels!
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- ★ Outwear iron, rubber or composition wheels!

Made from selected hard maple; furnished in diameters from  $2\frac{1}{2}$ " to 20" and tread faces from 1" to 6" wide. Supplied as complete rigid or swivel casters—or as wheels only—with either anti-friction or patented end-wood bearings which are an integral part of the wheel and will never wear an axle out of round.



These patented wheels are saving vital rubber and steel in countless war production plants and can solve YOUR problems, too. For full particulars, write or wire:

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Makers of Wheels, Casters, Cable Dollies and Gravity Conveyors

## JOB EVALUATION:

# Los Angeles Manufacturers Group Has Analysis Program

FOR THE average employer, employee relations like Topsy "just grew up." Mr. Average Employer, in the main anxious to do the most he can for his employes, has his plant policies relating to wages and hours, to working conditions; policies relating to vacations and sick leaves. What Mr. Average Employer does not have is a planned policy relating to job classification and evaluation. Job classification will insure that Joe Smith who is really a machinist and doing this work is not placed in the same category with John Green who just "works at a machine." Job evaluation will insure the proper wage determination.

Comprehensive job analysis programs are nothing new to the large industrial concerns. They have had them for years. Mr. Average Employer probably knows that such a program of job analysis is an excellent thing but just has not been able to get around to it.

Up until very recently, outside of the individual company or plant job analysis program, there was one community pro-

gram of this nature. It was rather limited as the program was conceived by a group of several larger employers in Philadelphia. More recently, Merchants and Manufacturers Association of Los Angeles set up a comprehensive job analysis program which gives without cost to those interested, the community picture in that area. Dr. P. A. Libby of the University of Southern California, College of Commerce, is chiefly responsible for the Los Angeles community job analysis program where he is working closely with Charles A. McKeand and with D. M. Mills.

The M & M motto is "Better Employee Relations" and it means just that. It started its community job analysis program nearly a year ago and it is now functioning smoothly. Each month questionnaires go out to a large group of employers. Thirty job classifications have been selected. With the answers in hand it has a comprehensive picture of labor in that area. The employer is asked to give current wage rates, hourly, weekly or monthly, which apply to each of this group of careful job classifications. Specifically it has in hand for anyone interested, the high, low and median pay rates for these jobs.

What is a job analysis program and how can such a program be achieved? In essence, the basic procedure of such a program can be summarized as follows:

1—Complete information regarding each job (i.e., the duties, responsibilities and worker qualifications) is gathered.

2—This information is then summarized and recorded.

3—The jobs are then arranged or classified according to some logical method.

4—Each job is then evaluated in accordance with its relation to every other job in the organization and a rate of payment established.

To anyone interested in job analysis, the 30 job classifications selected by the Merchants and Manufacturers Association in seeking information through its questionnaires should be of considerable value:

*Secretary*—Handles correspondence, filing and office routine for an executive or department head.

*Stenographer*—Takes dictation and types. May perform some simple clerical work such as posting, sorting or filing.

*Typist*—Types, but takes no dictation. Cuts stencils. Has ability to select and arrange material for typing.

*Clerk, File*—Records, indexes and files correspondence and other records which may require a general knowledge of departmental functions; subject matter; organization of files; cross reference, etc.

*Clerk, Billing*—Inserts unit price, extends and checks bills to customers from standard price lists. Familiar with prices, terms, discounts, deliveries, etc.

*Clerk, Stock*—Receives merchandise and stores until needed; keeps record of stock on hand and notifies purchasing department when stock runs low; marks goods; delivers requisitioned stock; records goods returned to stock; maintains inventory stock records and files.

*Clerk, Shipping*—Under general supervision to be responsible for all shipments of stock and freight; routes trucks; prepares bills of lading. May order stock and keep and take inventory.

*Telephone Operator*—Operates multiple switchboard; handles and records toll calls. May act as receptionist. May do some typing or routine clerical work.

*Comptometer Operator*—Operates a comptometer to compute or prove reports of a nature requiring a complete knowledge of the comptometer as a prerequisite of the work.

*Duplicating Machine Operator*—Operates Hectograph, Mimeograph, Ditto, Addressograph and other machines on reproducing work.

*Billing Machine Operator*—Operates billing, bookkeeping, statistical and other machines where more experience and training is required.

*Watchman*—Makes scheduled rounds of plant and/or offices.

*Janitor*—Consists of sweeping, dusting, cleaning fixtures, equipment and floors. Cleans lavatories, wash rooms, etc. Operates power cleaning tools.

*Semi and unskilled men*—Work requiring some skill and training. Includes heavy work and constant effort. Follow simple instructions. Includes general labor.

*Warehouseman*—Helps unload and load trucks or cars. Keeps stock in order. Puts up orders. May take or help in taking inventory.

*Truck Driver, Light*—Operates trucks up to two-ton capacity. Light deliveries. Familiar with traffic laws and regulations. May help in putting up orders. Licensed and usually bonded.

*Truck Driver, Heavy*—Understands operations of trucks over two-ton capacity. May have helper on truck if merchandise needs handling. Familiar with local and inter-state laws and regulations if over state line. Licensed and usually bonded.

*Mechanic, Maintenance*—Services various machines in the plant. Does accurate machine work to close tolerance with little supervision. Uses all types of mechanic tools, lathes, drill presses and grinders. Is able to use shop mechanics. Reads blueprints.



If you want the many advantages of doing business with this bank, don't let traffic and parking problems influence you. Our Mailway service is the answer. Experience shows nine out of ten banking transactions are routine that you can handle more easily and cheaply by mail. Our Mailway envelopes and forms make this service especially convenient and safe.

Write for information today.

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*California's Oldest National Bank*  
Member Federal Deposit Insurance Corporation  
ONE MONTGOMERY STREET

**Electrician, Maintenance**—Maintains plant electrical equipment under minimum supervision. Makes motor repairs. Installs conduit and circuit wiring for simple motor, control or lighting installations.

**Carpenter, Maintenance**—General carpenter and cabinet work in plant. Sets up and operates wood working machines. Maintains saws and knives. Is able to work from drawings or samples. May direct work of helpers.

**Welder, Spot**—Joins together two or more overlapping pieces of metal by means of a spot-welding machine, or clamps pieces into bed of machine to hold them in desired position.

**Welder, Arc or Gas**—Fuses metal parts together by means of welding apparatus and welding rods to fabricate metal shapes or articles, or to repair broken or cracked metal objects. Must be able to use shop mathematics and interpret blueprints.

**Trades Helper**—Assist and work under direction of first and second class operators (as machinists, carpenters, electricians, etc.).

**Machine Operator**—Operates large and expensive automatic machines requiring close or special attention.

**Machinist**—Sets up and operates various types of machine tools, such as lathes, shapers, milling machines, grinders, etc., or ordinary fitting and assembly. Works from drawings under minimum supervision to reasonably close tolerances.

**Tool and Die Makers**—Involves some special skill of standard design and construction. Works to very close tolerances and/or accurate fits on profile gauges, combination blanking and forming dies, drill jigs, machine shop tools, etc.

**Assembler, Semi-Skilled**—Assembles parts requiring some adjusting; repetitive work, somewhat diversified. Some supervision required.

**Assembler, Skilled**—Assembles parts requiring close and accurate fittings involving use of precision tools. Little supervision.

**Inspector, Visual Only**—Inspects parts for visual defects, such as blow holes in castings, poor finish, etc.

**Inspector, Visual and Precision**—Inspects product for both visual defects and for size and shape. Should be capable of using precision tools for measurement and should have thorough knowledge of product and its requirements. Checks first piece or sample against specifications.

Secretary of Labor Frances Perkins last month certified to the War Labor Board that a wage dispute exists between Vultee Aircraft, Inc., Downey, Calif., and the United Automobile, Aircraft and Agricultural Implement Workers Union, CIO. The dispute was not considered important as involving classifications for certain workers.

## Los Angeles Plant Speeds War Work

Western plants by and large have cooperated closely with the March call of WPB head Donald M. Nelson for the organization of management-labor committees to speed war production. In unionized plants, the employes have equal membership on the committees with management. Typical of the organization of these plant committees is that made effective by Plumb Tool Co. of Los Angeles, maker of small tools which is now producing seven times as much as in 1940.

The company has four major departments: forge shop, polishing and grinding, machine shop and stockroom. On four Thursday afternoons of each month from four to five p. m. the company has committee meetings of five rank and file employees and five members of management. One Thursday is devoted to each of the departments. Management members consist of the works manager, chief of the industrial engineering department, personnel director and chief of inspection. Other executives aid in ex-officio.

Company runs three shifts and conferees are taken from the first and second shifts. The result is that the conference is half on company time and half on the employees' time. Conferees rotate so for practical purposes there are five different members at each meeting. This has the effect of ultimately giving everybody in the department a chance to sit down with the "brass hats" and discuss matters of company business on equal terms.

## Travel Restriction

Civic officials and representatives of travel promotional bureaus last month were frankly worried over discussions of the possibilities of restriction of train travel. WPB was reported as in favor of such a plan.

The Office of Defense Transportation was understood to be considering a requirement that the prospective ticket-purchaser must show a good reason for a trip. Ordinary business trips will probably be oked. The idea is to discourage vacation travel. Here on the Pacific coast a train journey between such cities as Los Angeles, San Francisco, Portland, and Seattle is already something of an achievement. Reservations have to be secured a week or more in advance. Southern Pacific and other roads have already taken off schedule several important coastwise trains.

Most seriously affected by elimination of vacation trips would be southern California, particularly Los Angeles. Here tourists are big business—each year tourists spend many millions of dollars—some lured by the attractive national advertising campaign of the Southern California All-Year club. A huge segment of business here depends on the tourist trade.

## Pacific Northwest Averts Pulp Shortage

The pulp shortage which seriously threatened last year now appears to be averted by a substantial increase in domestic production, coupled with a decrease in exports. Pacific Northwest pulp producers have been operating at capacity for many months.

Domestic production of all grades of pulp rose to an estimated 2,757,000 tons in the first three months of 1942, a gain of 17 per cent, or 399,000 tons more than were produced in the record-making first quarter of 1941, according to an estimate by Ossian Anderson, president of Puget Sound Pulp & Timber Co. He also pointed out that since exports for the quarter were 10,700 tons less than in the like period last year, domestic supply available for home use exceeded last year's first quarter figures by 409,700 tons.

Turning to one of the most acute spots in last year's threatened shortage, Anderson stated that unbleached sulphite production, totalling 343,000 tons in the first quarter of 1942, was 76,000 tons higher than in the like period of 1941, while exports were 4,000 tons lower, making a total increase of 80,000 tons available to domestic consumers.

## IMMEDIATE HELP AVAILABLE

We are helping manufacturers solve some problems of:

- securing war contracts
- keeping customer good will
- continuing service to customers
- maintaining employee morale
- training new employees
- planning for post-war adjustments

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Write for leaflet, "How to get immediate help in solving some of today's problems."

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# VIEWPOINT

Readers are invited to give their views and exchange ideas through the medium of the editorial columns of Western Industry. Additional information relating to subjects of articles can be obtained by writing the Editor, using business letterhead if feasible.

Dear Sir: In the May issue of Western Industry is a letter by Rear Admiral J. W. Greenslade, Commandant of the Twelfth Naval District, relative to the Reber Plan for San Francisco bay, which I feel calls for a reply.

The Commandant objects to the Reber Plan apparently for two reasons: (1) For military reasons, and (2) by reason of the "so-called Salt Water Barrier Idea." The writer pretends to no military knowledge and therefore will not presume to comment on such objections, except to say that a military advantage though sometimes quite vital, as perhaps at present, is nevertheless not an ultimate object in itself in our social and economic structure and therefore if a project has advantages enough, it may be desirable to influence and change military plans for the general good.

The Commandant's statement that "the plan hinges primarily upon the so-called 'Salt Water Barrier Idea' which was fully investigated by the corps of engineers, etc." may be misleading to many who are not fully familiar with the two plans.

The Reber plan has a great many advantages not present in the "Salt Water

Barrier Idea"; in fact the salinity control of the upper bay accomplished by the Reber plan, is only a secondary advantage of that plan. "The Salt Water Barrier Idea" was not found to possess enough advantages to justify its construction in the opinion of some authorities. It should not be confused with the Reber plan which is a much broader concept and of much greater value.

It requires no imagination to tabulate newly created values of \$1,500,000,000 to \$2,000,000,000 resulting from the Reber Plan. Its accomplishment will be of tremendous advantage to every part of the bay area and to the entire state.

Though individuals or special groups may point out some possible disadvantages to themselves, it is hoped that the Reber plan will be studied and acted upon not on the basis of individual selfish interest or objections from secondary groups, but rather from the broadest view point of advantage to the Bay area and the State of California.—L. H. Nishkian, Consulting Engineer, San Francisco.

Dear Sir: Our greatest progress in the furtherance of our present war effort is not going to be by building more plants, but by using more efficiently the plants we have. The greatest error we have made so far is that we think of production in terms of man hours rather than in terms of what that man can do in that hour.

When we begin to increase the efficiency of our present operations, it will be a very simple thing to double our present production with the same number of man hours. We can, inside of another few months, double that again, if the efficient methods

which the industrial geniuses know can be applied and are enthusiastically followed.

As an example of this, in the present building of ships, 1/8" and 5/32" electrodes are being used largely for welding. If these should be changed to 3/16" and 1/4", the speed of welding would be more than doubled. The cost of the electrode also would be reduced, the production of electrode by the same number of man hours would be increased, and the reliability of the joint would be increased.

The great problem we have is not more welders, more shipyards and more men, but more efficiency with what we now have. Man hours alone never will beat the Axis, as we are seeing. The efficiency possible by the application of industrial genius will. J. F. Lincoln, President, The Lincoln Electric Co., Cleveland, Ohio.

## Western Cordage Men Seek Hemp Substitute

IF ANYTHING, the economics affecting future supplies of manila fibre for hard-fibre rope making are worse than the situation prevailing in rubber. The only available stock of manila fibre constitutes the quantity of raw and finished stock now in this country or what may have cleared the Philippines before the fibre producing districts fell into enemy hands. There are no other regularly producing areas of consequence. Result, users have to realize that they will have to conserve supplies—make rope last longer.

Rope-makers must do business with present stocks augmented by such sisal fibre as is immediately available, meanwhile trying to develop additional substitutes and sources of supply. The outlook at the moment is not encouraging to find something just as good as manila rope, San Francisco cordage men declare. Experimental plantings of manila fibre bearing plants in Central America and elsewhere have met with some success, but nothing of a nature to alleviate the situation in the immediate future.

Manila fibre comes from a plant botanically known as *Musa Textilis*, a form of banana. In some locations, it is known as "abaca," and should not be confused with "agave." Henequen and sisal from which rope and twine are produced are now under government control, coming largely from below the Mexican border, the Caribbean, Africa, and prior to Japanese invasion, the Netherlands East Indies. The prospects of using the yucca tree of a similar family also are being viewed for rope producing, but with no prospect of being able to take the place of the manila fibre. Progressive manufacturers now are offering a sisal rope for commercial use which does not require priority ratings.

## SHIP BUILDERS and SHIP REPAIRS

Machinists  
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Boilermakers

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P O R T L A N D

O R E G O N

## New WPB Regulations

Either in an effort to save critical materials, or as an indirect admission the present wartime production is sufficient, the War Production Board has established broad principles governing all wartime construction which will bring such industrial building under more rigid conservation control.

The program means that industrial operators may not build new plants unless they are absolutely essential and can meet seven newly established requirements. This applies not only to direct war plants but to all other construction, both publicly and privately financed.

The seven directives, as outlined by Donald Nelson, and becoming immediately effective are: No project will be approved for construction unless: 1) It is essential for the war effort; 2) Postponement of construction will be detrimental to the war effort; 3) It is not practical to rent or convert existing facilities for the purpose; 4) The construction will not result in duplication or unnecessary expansion of existing plants or facilities now under construction or about to be constructed; 5) All possible economies have been made in the project, resulting in deletion of all non-essential items and parts; 6) The projects have been designed of the simplest type, just sufficient to meet the minimum requirements; 7) Sufficient labor, public utilities, transportation, raw materials, equipment and the like are available to build and operate the plant. The manufactured product can be used at once or stored until needed.

\* \* \*

Western truck operators and other industrialists dependent upon truck transportation are studying the possible effects of the recent ODT order designed to consolidate schedules and improve the efficiency of truck operations. The ODT has postponed until July 1 the effective date of a provision requiring trucks to be loaded to at least 75 per cent of capacity on their return trips in order to cut down on dead mileage. Capacity loads are redefined as being those which do not exceed by more than 120 per cent the rated tire capacity of the truck, according to a scale set in an appendix to the orders.

\* \* \*

Western wineries as well as brewers and manufacturers of distilled spirits are affected by the new WPB order sharply limiting the tonnages of blackplate which can be used for beer and non-alcoholic beverage closures. The same order completely prohibits the use of blackplate after August 1, and of tin, effective at once, in the making of closures for wine and distilled spirits.

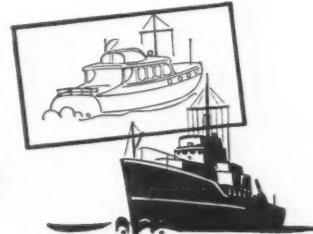


• Trackless trains speed handling in Western aircraft plant to turn out the huge volume of planes demanded by the military. Motors, hauling a string of flat-cars and gondolas, make their rounds throughout the Douglas Aircraft plant at Long Beach, California. The trains make their rounds throughout the plant with railroad time-table precision, each train covering no less than 55 miles daily!

Effective June 1, the use of blackplate in closures for beer and non-beverage bottles has been limited to 60 per cent of the tonnages used for the same purpose in 1941. However, manufacturers who in 1941 packed beer in flat-top cans and in sealed cans will be allowed, roughly, the use of three additional blackplate closures for each five cans used in 1941.

Appointment of Henry S. Wright, Phoenix, Ariz., as deputy director in charge of operations for the San Francisco region, has been announced by Harry H. Fair, recently named San Francisco regional director of WPB. Since March, 1942, Wright has been serving with WPB as executive assistant to L. Edward Scriven, deputy director of field operations for the Division of Industry Operations in Washington.

## from YACHTS to MINE SWEEPERS



To meet wartime needs, a California boat company recently switched its production from yachts to mine sweepers. This Bank furnished capital with great promptness to make possible this swift change-over...another case of Security's rapid, efficient handling of war production financing.

## SECURITY-FIRST NATIONAL BANK of Los Angeles

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WESTERN

# TRADE WINDS

NEWS ABOUT THOSE WHO DISTRIBUTE AND  
SELL INDUSTRIAL EQUIPMENT AND MATERIALS

## Buehrer Moves To New Quarters

**E**MIL C. BUEHRER, president of the E. E. C. Buehrer Co., San Francisco, has announced the removal of the firm's offices, machine shop and warehouse to

562 Bryant St. from the former address on Howard St. The Buehrer Co., for many years, has been a leading distributor of industrial equipment.

Buehrer is exclusive distributor for: Barrett-Cravens Co., Automatic Transportation Co., Nutting Truck & Caster Co., Ideal Stencil Machine Co., Economy Baler Co., Chas. H. Day Co., Union Metal Mfg. Co., Rapids-Standard Co.

**J**ULIUS BLUM & CO., Inc., New York, announces completion of arrangements to carry a stock at their western office of Tenite II Tubing. This product is a new transparent or solid color tubing to be used as a substitute for brass or copper under certain conditions. The Blum Company is represented in the West by J. G. Holzgang, 1725 Venice Blvd., Los Angeles, Calif.

C. R. Owens and R. W. Steenrod have been appointed welding specialist and industrial heating specialist, respectively, of the General Electric Pacific district. Simultaneously, the appointments of A. D. Boardman as Pacific District industrial control specialist and L. E. Donahue as industrial control specialist at the Los Angeles office were announced.

The Swartwout Company, Cleveland, Ohio, has organized The Swartwout Pacific Co., with offices at 560 Seventh St., San Francisco and complete facilities for



manufacturing the industrial roof ventilators in the large Swartwout line. A substantial increase of industrial expansion on the coast during the last eighteen months to meet war requirements dictated the decision to locate a plant convenient to this territory.

A. D. Dennis, who was at one time connected with the Bank of America in San Francisco, and for the past 6½ years has been an internal revenue agent, has been appointed secretary-treasurer of the La-Plant-Choate Mfg. Co., Inc., Cedar Rapids, Iowa.

The Chicago Tramrail Company of Chicago, Illinois, manufacturers of special hand and electric cranes and overhead equipment, announces the appointment of the Transmission Engineering Co., 259 Second St., San Francisco, Calif., as their Pacific Coast representatives.

Wakefield Baker of the wholesale hardware firm of Baker-Hamilton & Pacific, San Francisco, has been appointed a member of the Pipe, Wire Products and Galvanized Sheet Jobbers Subcommittee of the Iron and Steel Industry Advisory Committee, under the Bureau of Industry Advisory Committee of the War Production Board.

Leupold & Stevens Instruments is the successor to Leupold, Volpel & Co., manufacturers of hydrographic and surveying instruments of Portland, Ore. Officers of the new organization are Fred Leupold, general manager; J. C. Stevens, engineering consultant; Marcus Leupold, assistant manager, and Robert J. Stevens, sales manager. Following the purchase of the interest held by the late Adam Volpel by the two senior members of the firm, a reorganization has been effected and the company has moved into larger headquarters at 4445 N.E. Glisan St., Portland, Ore.

Herbert Wirshing, in charge of Pacific Coast sales for Waukesha Motor Co. since the branch was established in Seattle in 1932, has resigned his position. He will be succeeded by A. G. Mulkey, who has been manager of the Seattle branch office.

Peerless Pump Division of the Food Machinery Corp. of Los Angeles, Calif., and Canton, Ohio, has announced the acquisition of the Sterling Pump Corp., with plants at Hamilton, Ohio, and Stockton, Calif. Vernon Edler, vice president and general manager of the Peerless Pump Division, reports that the Sterling plant at Hamilton will be consolidated with the Peerless plant at Canton, Ohio, and the Sterling plant at Stockton will be merged with the John Bean Mfg. Co., division of the Food Machinery Corp. at San Jose, Calif. Consolidation of the two plants is expected to expedite the handling of an expanding volume of pump orders. The line of deep well turbine pumps, jet pumps and small domestic pumps, manufactured by Sterling for the past 25 years, will complement the Peerless line of deep well turbine pumps, Hi-Lift pumps, and Hydro-Foil pumps.

Grani-tile Manufacturing Co., Ltd., operating at 1060 Raymour Ave., Vancouver, B.C., is now making a line of building products to substitute for a wide range of material formerly made of steel and iron. The firm is also making a fireproof board. The basic product of all the lines is "grani-tile" which is made of cement and long fibre asbestos and is made up in standard sheets, four feet wide, to standard thickness.

S. C. Hinkle of the Mine & Smelter Supply Co., Denver, Colo., has been appointed a member of the Pipe, Wire Products and Galvanized Sheet Jobbers Subcommittee of the Iron and Steel Industry Advisory Committee, under the Bureau of Industry Advisory Committee of the War Production Board.

Earle M. Jorgensen, president of the Earle M. Jorgensen Co., Los Angeles, Calif., has been appointed a member of the General Steel Warehouse Subcommittee of the Iron and Steel Industry Advisory Committee, under the Bureau of Industry Advisory Committee of the War Production Board.

*a finish for every industrial need*

**PACIFIC PAINT & VARNISH CO.**

544 MARKET STREET

SAN FRANCISCO

EXbrook 3038

# THE WEST ON ITS WAY

## New Chemical Plant

Stauffer Chemical Co. last month announced the opening of its new plant on Suttle Road, North Portland, Ore., as an important addition to its already extensive production facilities. The new plant is producing insecticides, fungicides, and sulphurs for agriculture in the Northwest and sulphate of alumina for pulp and paper manufacturing.

Northwestern headquarters are located at the new plant with Dan Keating in charge of the Stauffer Northwest sales force. Reese Jenkins is plant superintendent with a staff of technical men which includes J. D. Vertrees, prominent Pacific Coast entomologist who recently joined the company.

The Lynden Refining Co., Inc., is building a \$75,000 plant on the Van Waveren property, three miles northeast of Lynden, Wash. for the manufacture of glucose, starch and other products, to use an estimated 12,000 tons of potatoes in its initial year. The plant is expected to be completed by October.

The Rheem Manufacturing Co., Richmond, Calif., plans to erect a new factory in Portland, Ore. The new plant will be employed largely for the production of steel containers, although other products will be made.

Lehi, Utah, has been selected for a new brickmaking plant which will employ forty to sixty people.

W. E. Waste, general manager of the Marin shipbuilding division of the W. A. Bechtel Co., announced that July 1 is the date set for the first keel laying in the new shipyard now under construction at Pine Hill in Sausalito, Calif. The first liberty ship is expected to be launched by Christmas.

Sugar beet growers of the West are confronted with an acute shortage of labor coupled with the fact that this year they are trying to increase production to offset loss of sugar from other sources.

Beet growers in California, Idaho and Montana last month made a plea to the Department of Justice asking that immigration bars be let down and that 6,000 Mexican workers could be imported to do farm labor in their fields. Under the pending proposals, 3,000 Mexican workers would be employed in California, and 1,500 each in Montana and Idaho.

J. H. Grayson, inventor of the Grayson Thermostat, now is building a plant near Raymond and Railroad avenues in Monrovia, Calif., for the manufacture of a cast milling machine cutter. According to Grayson, the cutter slices through the hardest metal like wood, and within a few months' time, it is expected to accelerate production in defense plants throughout the nation.

According to the local Chamber of Commerce, an expenditure of more than \$5,000,000 has been authorized for an air-base to be located at the present municipal airport, one mile east of Deming, N. M. More than \$9,000,000 is expected to be spent before the installation is completed. This base is to be utilized as a bomber school.

## Shipbuilding Speed-up

Still not satisfied with its splendid record of keeping "way ahead of schedule" in the production of critically needed tonnage, officials of the California Shipbuilding Company have announced plans for further increasing the speed of their output. According to John A. McCone, executive vice president of the firm, plant engineers have completed a survey seeking to extend plant facilities. The plan, already submitted to the Maritime Commission at Washington, D. C. is expected, if adopted, to "permit 50 per cent more tonnage construction by the end of 1943." Tentative plans call for extension of yards, fabricating mills and grounds. Improvements and additions will cost an estimated \$4,000,000.

## Indoor Oil Field

An "indoor" oil field which has been proposed for Los Angeles may soon become a reality. Last month Secretary of the Navy Frank Knox was reported as urging the approval of an application before the Los Angeles City Commission which would permit the establishment of the indoor oil field within the city limits in the Gilmore district in the western portion of the city.

Los Angeles city ordinances prohibit drilling of any new oil wells within city limits. A zone variance has been sought to permit drilling in a non-industrial area. Sponsors of project have agreed to house the entire development to mollify residents who protested establishment of the field on the ground it would be unsightly and odorous.

## Plant Expansion

Completion of the production-doubling \$1,300,000 expansion of the soda products plant of the American Potash & Chemical Corp. at Trona, Calif., is expected by January 1, 1943. The work is divided into two parts. The first, representing an investment of \$300,000, is being done by the corporation's engineering department, while the second, on which \$1,000,000 is being spent, is under contract to United Engineers & Constructors Inc. of Philadelphia, Pennsylvania.

The present production of the soda products plant is 145 tons of sodium carbonate and 205 tons of sodium sulfate a day. The plant expansion was undertaken in response to a request from the government, the supply of the two chemicals having been found inadequate for the increased war production.

The Air Reduction Sales Co., currently represented by the Acme Transfer & Storage Co., in Tacoma, Wash., is erecting a plant for the production of oxygen gas. Development of Tacoma's shipbuilding in which gas is used in large quantities for cutting steel plate as well as for welding was the factor which directed this move.

Steel going into war industry alone this year more than equals the entire U. S. consumption of steel for all purposes during 1932 and our total industrial production is three times 1932's.

**A.P. Johnston**

STAINLESS  
STEEL  
WELDING  
RODS

A.P. Johnston  
1545 EAST 57TH ST., LOS ANGELES, CALIF.  
TELEPHONE KIMBALL 2508

## Calendar of Events

June 4-6—UTAH STATE DENTAL SOCIETY, State, The Newhouse Hotel, Salt Lake City, Utah.

June 8-10—NATIONAL ASSN. OF INSURANCE COMMISSIONERS, Denver, Colo.

June 8-10—CENTRAL WESTERN SHIPPERS ADVISORY BOARD, Cosmopolitan Hotel, Denver, Colo.

June 9—COLORADO POTATO GROWERS EXCHANGE, State, Denver, Colo.

June 10-12—ROCKY MOUNTAIN COAL MINING INSTITUTE, Utah Hotel, Salt Lake City, Utah.

June 11-14—WASHINGTON BANKERS ASSOCIATION, State, Davenport Hotel, Spokane, Wash.

June 14-16—CALIFORNIA CIRCULATION MANAGERS ASSOCIATION; PACIFIC NORTHWEST CIRCULATION MANAGERS ASSOCIATION; WESTERN CONFERENCE OF CIRCULATION MANAGERS, at the Mark Hopkins Hotel, San Francisco, Calif.

June 16-18—INTERNATIONAL CIRCULATION MANAGERS ASSOCIATION, Mark Hopkins Hotel, San Francisco, Calif.

June 17-20—PACIFIC NORTHWEST MEDICAL ASSOCIATION, Regional, Portland, Ore.

June 18-19—PACIFIC COAST TRANSPORTATION ADVISORY BOARD, Oakland, Calif.

June 18-20—MONTANA BANKERS ASSOCIATION, Canyon Hotel, Yellowstone Park, Wyo.

June 19-20—NORTHWEST AVIATION PLANNING COUNCIL, Regional, Davenport Hotel, Spokane, Wash.

June 21-24—CALIFORNIA PHARMACEUTICAL ASSOCIATION, State, Fairmont Hotel, San Francisco, Calif.

June 22-26—AMERICAN NEWSPAPER GUILD, National, Denver, Colo.

June 25-27—PACIFIC COAST HARDWOOD WHOLESALE DISTRIBUTORS ASSN., Regional, Del Monte Hotel, Del Monte, Calif.

June 28-July 2—NATIONAL EDUCATION ASSOCIATION, Denver, Colo.

June—OREGON MEN'S APPAREL ASSOCIATION, State, Portland, Ore.

June—OREGON ASSN. OF CLEANERS & DYERS, State, Timberline Lodge, Ore.

## OPPORTUNITY SECTION . . .

Priorities regulations have made it practically impossible to secure new machinery for industrial operations unless a plant is doing 100 per cent work on war projects. Even then, long delays are in prospect. The government is urging full use of existing machinery. Listed here are "machinery opportunities" immediately available here on the Pacific Coast. Recently, used machine tools were made subject to priorities, but this does not apply to other classifications of machinery.

## MACHINERY SALE

### MOTORS

- 1—260 H.P. Synchronous G.E. 225 RPM, 2200 volts, 210 KVA.
- 2—250 H.P. Westinghouse, Type CS, 290 RPM, 2200 volts.
- 1—200 H.P. G.E. Type I, 600 RPM, 440 volts.
- 1—200 H.P., G.E. 1800 RPM, 440 volt motor.
- 1—150 H.P. Westinghouse, Type CS, 1800 RPM, 440 volts.
- 1—150 H.P. Type B.F.M. 720 RPM, 440 volts.
- 1—150 H.P. Westinghouse, Type CS, 900 RPM, 2200 volts.
- 1—150 H.P. G.E. Type I, 720 RPM, 440 volts.
- 1—100 H.P., Slip Ring, G.E., 720 RPM, 440 volts.
- 1—75 H.P. Crocker Wheeler, 900 RPM, 440 volts.
- 1—62½ Ft. 25½-inch Double Leather Belt.
- 1—50 H.P. Westinghouse, 900 RPM, 440 volts.
- 1—50 H.P. Vertical Fairbanks Morse, 1200 RPM, 220 volts, solid shaft.
- 1—35 H.P. Crocker Wheeler, 1200 RPM, 220 volts.

### GENERATORS, BLOWERS, WATER PUMPS

- 1—1500 Watt, Direct Current, 110 volt, Kohler automatic light plant.
- 1—300 H.P. Triumph Water Wheel with governor, 50 ft. head.
- 1—200 K.W. Westinghouse A.C. Generator, 900 RPM, 440 volts, 3 phase.
- 1—No. 70 ILG Blower, 17,430 CFM, direct to 6 H.P. 340 RPM, 3 phase motor.
- 5—75 KVA Transformers, Wagner Type HE, 6600 to 220/440/880 volts, 60 cycle.
- 2—75 KVA Transformers, G.E. Type H, 6600 to 120/240/480 volts, 60 cycle.
- 1—60 H.P. Byron Jackson Turbine pump, 1200 GPM at 140 ft. head.
- 1—50 H.P. Single Drum Mine Hoist.
- 1—20-inch Krogh Split Case Pump, 11,000 GPM at 26-ft. head.
- 1—5 KVA, 110/220 volt Alternating Current Kohler automatic light plant.

### RELIABLE ELECTRIC WORKS

1831 Q STREET

SACRAMENTO, CALIF.

## ELECTRIC MOTORS

COMPLETE ELECTRIC MOTOR SERVICE

### VERTICAL MOTORS

- 40 HP 1800 RPM Solid Shaft Fairbanks Morse
- SLIP RING MOTORS**
- 7½ HP, 1200 RPM Type CW Westinghouse
- 50 HP, 900 RPM Type MT General Electric
- 75 HP, 900 RPM Type HV F. M. Ball Bearing

### MULTI-SPEED MOTORS

- 7½/15 HP 4/8 pole Type QSX Fairbanks Morse
- 30 HP—6/8/12/16 pole Constant HP West.

### TWO POLE MOTORS—BALL BEARING

- 50 HP—3600 RPM, Type HO Fairbanks Morse
- 60 HP—3600 RPM, Type FT General Electric
- 75 HP—3600 RPM, Type SC Howell
- 100 HP—3600 RPM, Type SC Howell

### 2200 VOLT

- 150 HP 1200 RPM Type I—double extended shaft—G.E.

### DC MOTORS

- 3—1½ HP 115 Volt 1750 RPM Shunt wound
- 7—2 HP 115 Volt 1750 RPM Shunt wound
- 1—20 HP 230 Volt 800 RPM Type DLC G. E.

Rewinding 2655 Santa Fe Avenue Repairing  
JEfferson 5255 Los Angeles, Calif. JEFFERSON 5255

## LITTLEJOHN-REULAND CORPORATION

## TRANSFORMERS

*Used and Rebuilt Oil-Cooled Transformers in Stock*

### Single Phase, 50 or 60 Cycle 2200 to 110/220 Volts

- 3—1 K. V. A. Westinghouse
- 3—1½ K. V. A. Westinghouse
- 2—2 K. V. A. Westinghouse
- 4—3 K. V. A. Westinghouse
- 4—5 K. V. A. Westinghouse
- 3—10 K. V. A. General Electric

### Single Phase, 50 or 60 Cycle 2200 to 440/220 Volts

- 2—5 K. V. A. Westinghouse
- 1—7½ K. V. A. Westinghouse
- 1—15 K. V. A. Westinghouse
- 3—10 K. V. A. General Electric

### Single Phase, 50 or 60 Cycle 440 to 220/110 Volts

- 4—1½ K. V. A. Westinghouse
- 8—3 K. V. A. Westinghouse
- 12—5 K. V. A. Westinghouse
- 4—7½ K. V. A. Westinghouse
- 3—10 K. V. A. Westinghouse
- 1—37½ K. V. A. Westinghouse

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# THE SHOWCASE

## Do a BETTER JOB with NEW EQUIPMENT

For more complete information concerning any of the products listed in these columns, write to Western Industry, 503 Market Street, San Francisco, and we shall see that the material is forwarded to you. Descriptions of the products and claims made are those of the manufacturer.

- **FINGER GUARD**—A practical finger guard, or finger stall, combining tough leather and flexible lastex, has been designed recently. It gives protection on fingers and thumb, in any combination, to buffers, polishers, sanders, grinders, oper-

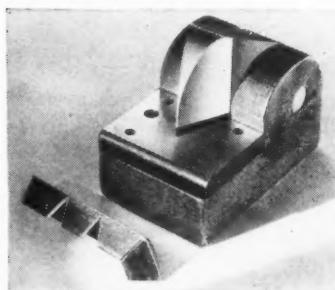


ators of stamping-out presses, assemblers of small parts, book binders and machine operators. Industrial Gloves Co., Danville, Ill.

- **PLASTIC THROW-AWAYS**—The familiar screw-plug, dummy-plug, cap-plug or other device for the protection of equipment or articles from dirt, dust and moisture while in transit, is now being made from a new tough plastic. Having no functional value after the shipment reaches its destination, the manufacturer claims big savings are effected by the use of the plastic "throw-away" instead of plugs made from vitally needed metals. American Molded Products Co., 1751 No. Honore St., Chicago, Ill.

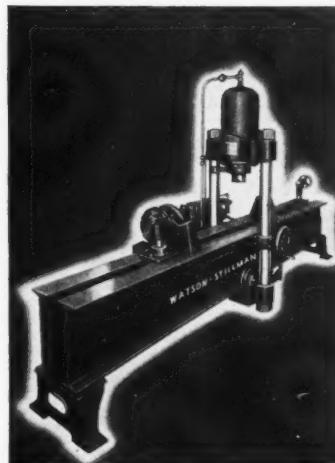
- **NOTCHING DIES**—These new dies were designed to notch eleven-gauge angle iron right up to the leg. In the case of angle to be bent, the dies leave a portion of metal unnotched in the corner to permit easy and exact bending into position for simplified

precision welding of the legs. These dies are self-contained with the punch and die in constant alignment. A line-up of these dies on a T-slotted plate will do a complete



notching pattern in one stroke of the press. Because of their flexibility, the manufacturer reports that it is possible to set up patterns by positioning the holders to a templet and then locking them onto the T-slotted plate. The Strippit Corp., 1200 Niagara St., Buffalo, N.Y.

- **STRAIGHTENING PRESS**—An improved 125-ton straightening press, embodying extremely sensitive control by a single hand lever, has been developed for straightening gun barrels. The press also is suitable for straightening shaftings, forgings and like products. The unit is of the manually movable press type, a hand-wheel controlling movement of the press



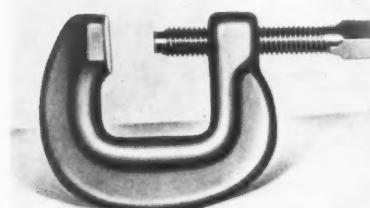
along the table. Speeds claimed by the manufacturer are: Advance, 87 inches per minute; pressing, 13½ inches per minute; and return, 78 inches per minute. The entire unit weighs approximately 7500 pounds, is ten inches high, and requires 14 feet by 5 feet floor space. Watson-Stillman Co., Roselle, N.J.

- **TALKING TOWELS**—Each towel carries on the face of its fold a brief illustrated message. The series includes "hush-hush" cautions against indiscreet talk that might supply information to an enemy; reminders not to credit nor spread adverse or discouraging rumors about the United States; rules for safety in work; the necessity of speed-up to help win the war. These towels are 50 per cent larger than the ordinary ones, and eliminate wasteful use of more than one towel. Precision Paper Tube Co., 2033 W. Charleston St., Chicago, Ill.

- **BLACKOUT BULB**—Designed for blackout lighting in air raids, a new bulb recently announced provides downlighting in a soft beam of blue light that is claimed



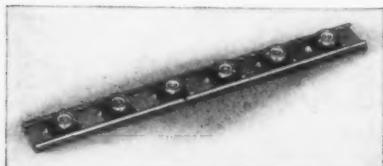
as safe for indoor visibility during blackouts. The bulb is lined with a pure silver reflector which hides all filament glare and projects the light downward. Light leaks are prevented by a black silicate coating which covers the bulb up to the extreme lighting end.—Wabash Appliance Corp., 335 Carroll St., Brooklyn, New York.



- **C CLAMP**—Developed particularly for the U. S. Air Corps, these new high-strength C clamps exceed all Federal specifications. The extreme clamping strength (breaking point, 7800 pounds) is achieved by a 100 per cent drop-forged manufac-

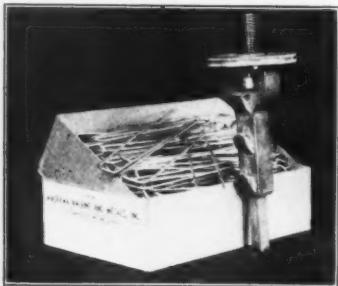
turing process, including complete heat treatment of all parts. The screw is the square-head type. Products Engineering Co., 416 So. Robertson Blvd., Los Angeles.

- **GANG CHANNEL NUTS** — Widely applied in the aircraft industry, this product now is offered for testing on the many applications in general industry where a



multiple, self-locking, bolted fastening is required. The strips are factory-assembled, and the manufacturer reports that it is necessary only to rivet or otherwise fasten them to the structure where they are to be used. They consist of specially designed stop nuts with four lugs at the base and installed at specified intervals in a metal channel strip which is preformed to accommodate the nut lugs under longitudinal flanges. The channel strip is pierced for the required nut size and spacing, and the nuts are held in place by dimples in the channel, tolerances permitting them to be self-centering. Elastic Stop Nut Corp., 2332 Vauxhall Road, Union, New Jersey.

- **HOSE CLAMPING** — A new method for clamping rubber or fabric hose to metal couplings quickly and simply was introduced recently. Done with loop-like bands of welded wire and a small tool, couplings are made in three simple operations requir-

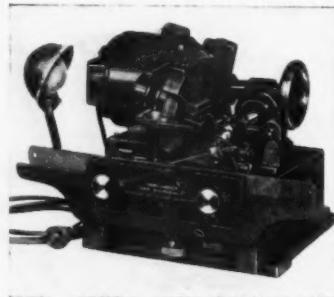


ing only a few minutes, according to the manufacturer, as compared with the hours' time previously required. This tool bends the band around the hose; then, by turning a small wheel and pushing forward, the band is clinched firmly, leaving a sturdy, permanent connection, it is claimed. American Machine & Metals, Inc., East Moline, Ill.

- **LATEX PROCESS** — Users of latex for cementing, impregnating and coating purposes should be interested in a new method of processing which extends the volume of latex from 50 per cent to 300 per cent while retaining the major characteristics of

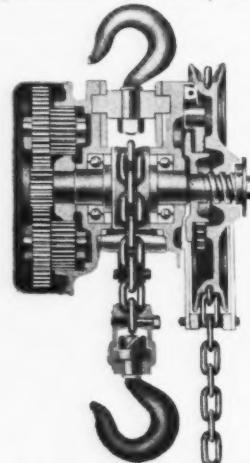
the original product as well as a good proportion of its natural strength. The process makes use of a filler material of such fine size that it blends extremely well with the rubber particles. Union Bay State Co., 50 Harvard St., Cambridge, Mass.

- **SAW SHARPENER** — This compact machine, with a minimum of attachments consistent with its range of work, is prepared, according to the manufacturer, to handle all kinds of saw sharpening problems. It is equally proficient in sharpening hand or power hack saws, circular saw or band saws for either wood or metal. Once adjusted to a given saw, the sharpener is



entirely automatic in operation and requires a minimum of attention. A speed of 83 teeth a minute is claimed, a speed which is the maximum consistent with a good sharpening job. Howe & Son, Inc., Hinsdale, N. H.

- **CHAIN HOIST** — An improved, standard type, spur geared chain hoist now is being manufactured, and is recommended for applications in practically all lines of



industry where a maximum amount of speed, safety, durability and efficiency is essential. Heavy suspension plates provide unbreakable support between top hook cross-head and load sheave, also supporting the saddle for double-chain hookup, eliminating the use of a top yoke, reducing weight and headroom and permitting the hoist to hang evenly at all times. Coffing Hoist Co., Danville, Ill.

## BUSINESS BOOKS

*Modern Glass Practice* by Samuel R. Scholes, Ph.D., was planned for use by students in glass technology, although executives and operatives in glass factories who may desire a more scientific and general view of the subject, have been considered, as well as the general reader in search of specific information about glass and its manufacture. Essentially a technical volume, it is replete with many charts, tabulations and illustrations. Price, \$6.00; published by Industrial Publications, Inc., 59 East Van Buren St., Chicago, Ill.

*Industrial Accounting* by Samuel Waldo Spectrie, M.B.A., C.P.A., is intended as text for engineers, engineering students and industrial and business administrators who wish to gain an understanding of the processes and executive uses of industrial accounting. The first twelve chapters provide a foundation in basic accounting principles and bookkeeping procedures. Especially stressed is the fact that accounting procedure is flexible and not only can but should be directed toward developing the particular facts in which management is interested. Price, \$3.75; published by Prentice-Hall, Inc., 70 Fifth Avenue, New York City.

*The Coming Showdown*, by Carl Dreher, poses the question, "Shall we produce what we need, or produce to make a profit?" Some of the arguments developed by the author are: "Our industrial system has been living on artificial respiration for at least a quarter-century. When the profits from the first World War stopped, conditions created a temporary foreign market by floating bonds. When the bonds declined in price, it was kept alive by government spending. Now, another war comes to the aid of profits. Must we have a war every generation to keep business alive?" Price, \$3.00; published by Little, Brown & Co., 60 East 42nd St., New York City.

*How Your Business Can Help Win the War* is a practical guide book designed to help our government meet total war needs by showing business men: 1. What the government wants to buy—How to bid—How to get contracts and sub-contracts for government orders; and 2. How to save time and money and cut red tape in contacting government offices. Included is a complete, up-to-date schedule of priorities, allocations and prices. Price, \$1.00; published by Simon & Schuster, 1230 Sixth Avenue, New York, New York.

# YOURS FOR THE ASKING

1064

- REDWOOD—A timely, eight-page bulletin, titled "Stepping Up War Production with Redwood" tells by picture and caption how, where and why redwood is serving in many uses important to the current war effort. This bulletin was prepared especially to acquaint engineers, architects, specification writers, contractors, lumber dealers and others, where jobs are done better and quicker with redwood than with restricted materials formerly used. Listed as one of the important commercial woods, it is stressed that redwood is durable even when used under conditions favoring decay; it is termite resistant, has less volumetric shrinkage, holds paint longer and suffers least when protection against weathering becomes inadequate; it has a high insulating value; and when set in proper construction, furnishes excellent fire protection. California Redwood Association, 405 Montgomery St., San Francisco, Calif.

1065

- EYE PROTECTION—"How to Encourage Eye Protection in Your Plant" is the subject of a new folder recently issued. The folder describes how several plants have cut eye injuries by appealing to the workers' self-interest in their safety program, and by making eye protection pleasant for the worker to use. Goggles and eye shields for grinding, machine work, riveting, dusty atmosphere, welding and many other uses are illustrated. E. D. Bullard Co., 275 Eighth St., San Francisco, Calif.

1066

- WIRE DATA CHART—A handy and indestructible wire data chart which should prove useful to every engineer who has occasion to employ wire in his designs or specifications, has recently been made available. On the face in columnar tabulation are given the B & S, Washburn & Moen, and the Stubs or Birmingham diameters for gauge sizes 1 to 50. In addition, the B & S column shows feet per pound for each size of standard five per cent phosphor bronze. Along one edge is an inch rule, divided into sixteenths. The card is of heavy white celluloid with the data printed in black and red, and is of convenient vest pocket size. Callite Tungsten Corp., Wire Div., Union City, N.J.

1067

- GAS BURNERS—Bulletin No. 203 describes the Peabody Type A and Type H gas and oil burners. These burners include a gas burner ring and an oil atomizer, each to deliver its respective fuel in a finely divided and uniformly dispersed screen across the burner throat, a gas burner saddle to hold the gas ring in posi-

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tion, an air register to mix the fuel with the combustion air, a tile supporting ring to center and support the throat tile, and a refractory burner throat to extend the important air-flow lines of the burner through the furnace wall and provide the initial combustion zone for the fuel. Peabody Engineering Corp., 580 Fifth Ave., New York.

1068

- RUBBER CONSERVATION—Prepared in vest pocket size format so they will be easy to carry, a series of six pamphlets on "How to Get the Most Service Out of Industrial Rubber Products" has been made available. The series is designed to assist in the tremendous program of rubber conservation now made necessary by war developments. Each of the subjects is subdivided into chapters dealing with the various angles of the topic, written in non-technical language. The B. F. Goodrich Co., Akron, Ohio.

1069

- METAL DUPLICATING—An informative 32-page booklet has been made available describing Di-Acro Precision Machines and the Di-Acro System of "Metal Duplicating without Dies." The Di-Acro System of forming or duplicating without dies is versatile in its applications for producing parts or pieces of intricate shapes. Many materials besides metals can be worked. In addition to stamping and forming for small quantities and experimental research and testing uses, the manufacturer claims the multiple units of Di-Acro Machines are proving profitable for production line work. Catalog No. 42-1. O'Neil-Irwin Mfg. Co., Minneapolis, Minnesota.

1070

- SHEET METAL—"What Every Government Contractor Should Know" is the title of an eight-page folder. It is divided into five sections, two of which list the products manufactured and the method used. Also, it contains interesting facts on substitution of weld-fabricating for castings in the manufacture of machinery and other war materials. Bargar Sheet Metal Co., 12401 Euclid Ave., Cleveland, Ohio.

1071

- DETACHABLE JACKBITS—The advantages of detachable Jackbits are described in a two-color, 24-page bulletin, Form 2780, which has been made available. This new bulletin, entitled "How

Jackbits Reduce Rock Drilling Costs," contains more than fifty illustrations, a table showing the types of Jackbits recommended for different kinds of work and various cost data. It shows how, on hard-rock jobs, the detachable Jackbits have raised drilling speed while lowering both drilling and steel-handling expense. Ingersoll-Rand Co., 11 Broadway, New York, New York.

1072

- ELECTRIC GAGING—Booklet GES-2543, recently issued, tells in a concise fashion of eleven outstanding instances where savings in both time and money, and at the same time improved quality, have resulted from the application of extremely sensitive yet sturdy electric gaging equipment. The booklet illustrates such electric gages as the strain gage, pressure gage, film-thickness gage, eccentricity gage, profile gage, electrolimit gages and the tensiometer. Applications for each are also suggested. General Electric Co., One River Road, Schenectady, New York.

1073

- OVERHEAD MATERIALS HANDLING—A twelve-page booklet, No. 2008-A, listing and illustrating a versatile line of overhead materials handling equipment has been made available. According to the manufacturer, because of the extreme flexibility of the equipment, installations may be anything from a piece of rail with an inexpensive hand-chain hoist and carrier to a plant-wide electrified system costing several hundred thousands of dollars. Listed are 15 different things the product is claimed to do for the user, along with numerable illustrations of the equipment in use. The Cleveland Crane & Engineering Co., Wickliffe, Ohio.

1074

- DIRECT-CONNECTED PUMPS—Bulletin No. 110, a four-page leaflet, lists all the products manufactured by Blackmer Pump. Included is a specification table. In an illustration, the principle of operation is explained: The bore of the pump is a true circle, and the rotor is set "off center." As the rotor revolves, the "buckets" move outward and are constantly in contact with the casing wall. Suction is created behind each bucket, while liquid is propelled ahead of the buckets as they revolve. As the buckets pass the discharge port, they are forced back into the rotor recess, reducing the space to zero at the top of the casing, between the suction and discharge ports, which action creates a steady even flow of liquid. Blackmer Pump Co., Grand Rapids, Mich.

## More "Yours for the Asking"

1075

• KENNAMETAL TOOLS — Easily carried in the pocket for ready reference, this new 48-page "Kennametal Manual" contains chapters on selecting, designing, using, brazing and grinding tools. Complete, easy-to-follow instructions explain how to get the utmost in service from all types of steel-cutting carbide tools. More than 100 illustrations are included. McKenna Metals Co., 196 Lloyd Ave., Latrobe, Penn.

1076

• PRECISION CLEANING — The cleaning machines and solutions described in this folder have been developed to handle large units in every field where a precision cleaning problem exists, whereas heretofore, this equipment was used extensively for small parts. The L & R equipment is not comparable in size to the large degreasing machines nor is its principle of cleaning the same. The L & R method is unique, and according to the manufacturer, may be controlled and varied for each particular problem, easily and efficiently. L & R Manufacturing Co., 54 Clinton St., Newark, N.J.

1077

• UNIT PACKAGING — Profusely illustrated, this booklet explains the carloader principle which combines the adoption of standard packages for materials, parts and finished products, with the use of a machine for handling these packages speedily and economically. It tells how to handle incoming material, package specifications, loading and unloading, receiving, storage, and describes various types of packages which can be used. Clark Tractor Division, Clark Equipment Co., Battle Creek, Mich.

1078

• CONTOUR MACHINING — "Doalls on Production" is a 78-page book of photographs taken of the Doall contour machines in operation, and is divided into nine sections. Each picture shows different applications for this machining process. Jigs, fixtures and attachments which facilitate this machining process are shown clearly in each picture, indicating the adaptability of these machines for production work. The book should be of value to plant production engineers, instructors and students. Continental Machines, Inc., 1301 Washington Avenue So. Minneapolis, Minn.

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• Left — Head or drive end of Belt Conveyor housed in gallery shown above.

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